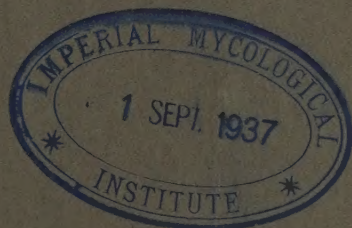


VOLUME XII
No. 4

GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

MONTHLY REPORT

AUGUST, 1937



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GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

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CONTENTS

PAGE

AGRICULTURAL CONDITIONS:—

THE CROPS, SUPPLIES AND PRICES	...	...	...	...	...	163
LIVE STOCK	...	...	...	...	...	165
THE COST OF LIVING INDEX FIGURE	...	...	...	...	...	167
THE MARKETS DURING JULY	...	...	...	...	...	167
AGRICULTURAL PRICES	...	...	...	...	...	168
THE APPLE CROP PROSPECTS	...	...	...	...	...	170
Agricultural Statistics for Northern Ireland 1936-37	...	...	...	...	...	171

MARKETING SCHEMES:—

The Agriculture Act, 1937:—

OATS AND BARLEY SUBSIDY	...	...	...	...	...	174
LAND FERTILITY SCHEME	...	...	...	...	...	178

Agricultural Marketing (Pig Industry) Act, (N.I.), 1934:—

GRADING AND PRICES OF PIGS	...	...	...	...	...	178
PIG PRICES FOR AUGUST, 1937	...	...	...	...	...	179
GRADING STATISTICS	...	...	...	...	...	182
COST OF STANDARD PIG RATION	...	...	...	...	...	182
LEVIES FOR PIG PRODUCERS	...	...	...	...	...	183

	PAGE
Milk and Milk Products Act (N.I.), 1934 and 1936:—	
APPEAL OF COUNTY DONEGAL MILK VENDORS	183
MILK INDUSTRY ASSISTANCE GRANT	185
The Cattle Industry (Emergency Provisions) Acts, 1934 and 1935	185
The Fat Cattle Subsidy	186
 AGRICULTURAL NOTES:—	
SEASONAL FARM NOTES	188
SEASONAL LIVESTOCK NOTES	189
SEASONAL GARDEN AND ORCHARD NOTES	191
SEASONAL POULTRY-KEEPING NOTES	192
 ANNOUNCEMENTS AND REMINDERS:—	
GENERAL	194
SCHOOL NEWS	195
HORSE BREEDING IN NORTHERN IRELAND	197
FLAX WATER	198
FIXTURE LIST OF FORTHCOMING SHOWS	198
REGISTRATION OF ACCREDITED POULTRY FARMS SCHEME	199
FIFTEENTH EGG-LAYING TEST AT STORMONT	199
 AGRICULTURAL PRICES:—	
FEEDING STUFFS AT SPECIFIED CENTRES	203
FEEDING STUFFS (WITH CALCULATED VALUES OF PROTEIN AND STARCH UNITS)	204
FAT STOCK AT BELFAST AUCTION MARTS	209
LIVE STOCK AT FAIRS	210
 AGRICULTURAL TRADE RETURNS:—	
SHIPMENTS OF LIVE STOCK FROM NORTHERN IRELAND PORTS	211
IMPORTS AND EXPORTS OF AGRICULTURAL PRODUCTS	212
NUMBERS OF CATTLE AND ACCOUNT OF TRADE AT FAIRS	213

MINISTRY OF AGRICULTURE

MONTHLY REPORT

AUGUST, 1937.

With weather conditions remaining comparatively fine into the second week of August, farmers have been able to make much progress with the harvesting of the hay crop. Most of the upland hay has been saved under fairly good conditions, and the yields should give general satisfaction both in quality and quantity. The saving of seeds hay continues under favourable conditions, and here again the prospects appear reasonably good. Meadow hay will have improved as the result of a spell of sunny weather following the moist conditions of July. Another crop that gives promise of good yields is the potato crop, which grew out well during July, and has continued to show a steady improvement since the return of drier weather.

It is learned that the harvesting of the oat crop has commenced in early districts, and it is to be hoped that weather conditions will remain favourable until the completion of the harvesting of all the cereal crops. Granting that nature proves accommodating in this respect, crop yields this year may be just as good as usually harvested following a normal season.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1st AUGUST, 1937.

The weather during the greater part of July was very wet, and the accompanying temperatures were low for the time of year. Rain fell almost every day, and exceptionally heavy showers fell intermittently during the long period of dull days extending from the last week of June to the last week of July. There was very little sunshine during this period, and conditions were rather cool for the month, especially at night time. The last four days of July brought much improved weather, and the real touch of summer, with the continuous bright warm sunshine, was much appreciated after an otherwise very depressing month.

The adverse weather conditions greatly retarded the work entailed in the harvesting of the hay crop and comparatively slight progress was made, only with difficulty and increased labour, during periods when harvest work was possible. Considerable damage from weathering was done to early cut hay lying in the fields, and much of the hay that was cut during last month will, it is thought, have suffered in quality from the damp conditions. The making of early cut upland hay was delayed by the wet weather. Incidentally, it was noted that in the County Down a few farmers adopted the tripod system for the purpose of saving their crop. The spraying of the potato crop, and the after cultivation of the root crops were also hampered by adverse weather conditions, but farmers managed to make fair progress with these operations, despite the difficulties encountered. Blight has appeared in most districts, but mainly as a result of systematic sprayings, its spread has been checked. Weeds made strong growth during the rainy weather, and added greatly to the work of after cultivation. The digging of the early varieties of potatoes was slowed down to some extent by the damp weather and soil conditions, but ample supplies were being raised for market requirements. Towards the end of the month the pulling of flax was commenced.

The growing crops have made satisfactory progress, especially the potato and root crops, and the weather has caused little damage to grain crops from lodging, except in the case of very heavy crops. Some flax crops, however, are reported to have been badly tossed by the heavy rainstorms. Pastures made rapid growth, especially in heavy soil areas, but it was learned that there was a tendency for the grass to become rank in fields where the number of grazing cattle was apparently insufficient to keep it short. Incidentally, the mower was brought into use on many farms where there was a tendency for the grass to become tall and seedy, and also where thistles were beginning to make some headway. The general appearance of pastures is, at the

moment, very pleasing, and there is plenty of good quality keep available for live stock. Notwithstanding this, however, the damp and cool weather appears to have retarded the normal marked improvement usually noticeable in cattle during this summer month, and many animals were reported to have made but a slow thrive. The health of the herds, however, has remained normal, but there have been a few slight outbreaks of "hoose" among calves, and "red water" amongst older cattle, whilst mastitis or felon is reported to have affected some dairy cattle. Sheep have made a fairly good thrive, and are in a normally healthy condition. Maggots have proved troublesome among flocks where dipping was done rather late.

Home-grown food stuffs have almost been cleared, and the prices ruling for the small supplies of fodder at markets continued relatively dear. Purchased feeding meals and concentrates were also selling at recent high prices, but it is understood that, despite the dearness of concentrated foods, some farmers were using them to a greater extent than in former years, not only for pig feeding and poultry, for which the demand is steady throughout the year, but for dairy cattle giving milk, and for fattening large stores.

THE CROPS.

WHEAT.—In many cases the crop made good growth, and the prospects for the harvest are promising, more particularly with the winter varieties of wheat. Spring-sown wheat is generally less satisfactory, and in a number of fields looks thin and patchy. Although ripening may be a little later than usual the yields will, in all probability, be equal to that of a normal season.

OATS.—There has been a general improvement in the condition of this crop, and lea oats especially are in a very promising state. On potato lands, however, the crop has not done so well, being generally light and inclined to be weedy. Lodging occurred in heavy soil areas, where the brairds were particularly thick, but the damage so far has been comparatively slight compared with this time last year. As in the case of all cereal crops this season, which were sown late, ripening will be later than usual, but granting all goes well until harvesting time, yields will not be much below the average.

Only small lots of white oats were marketed at a few centres during July, and the average price was 6d. cheaper on the month at 8/1d. per cwt.

BARLEY.—In most districts this crop made good growth during last month and the general prospects of obtaining normal yields this season are reasonably bright, despite the fact that in some districts the position is much less favourable, especially where sowings were done under adverse conditions. Here the crop has been very disappointing and the yields will be rather lighter than usual. Harvesting will be later than in a normal season and much depends on the weather between now and then.

FLAX.—The condition of this crop varies to some extent throughout the country but in the main it is in a fairly promising state. The rains induced rapid growth in many fields—too rapid, in fact, in some where it is feared the quality may be below the usual standard. More sunshine would have been appreciated before pulling which commenced at the close of the month. This work may be rendered difficult in those areas where there has been a fair amount of “tossing” as the result of the rainstorms. So far the yields of green flax have given satisfaction, but the average yield this year will, it is feared, be a little lighter than normally.

POTATOES.—The moist weather of the past month, on the whole, proved favourable to this crop which is now looking remarkably well in all districts. On account of the lateness of planting this year, the main crop varieties will need to be allowed to grow out beyond the usual time for digging, as otherwise the growing season will have been too short to produce normal yields. A good spell of drier and warmer weather would also be appreciated for this crop, as it is feared that further heavy rains will cause “sloaming” among the crops which made exceptionally rapid growth. Blight appeared and, although the wet weather was conducive to its rapid spread, the low temperatures, especially at night time, helped to keep it in check, and with spraying being done systematically through the country, the outbreaks have been confined to relatively small dimensions. As stated, fine weather would help this crop immensely and minimise the dangers from the spread of blight disease. Granting the crop is allowed to grow out under normal summer weather conditions, the yields may reach normal dimensions. The digging of early varieties proceeded slowly but steadily during July, despite the adverse weather and soil conditions, and the yields have been satisfactory in most instances, both as regards quality and quantity. It is understood that this is particularly true in respect of late diggings of first and second early varieties.

Increased supplies of early varieties of potatoes were marketed for local consumption during last month, and prices declined further, and averaged 6/11½d. per cwt. as against 11/9d. per cwt. for the first supplies offered in June.

Shipments of potatoes from Northern Ireland ports to Great Britain continued on a much smaller scale than in the previous month, and were below those for the corresponding month of last year. The following were the weekly shipments last month, and in July, 1936 :—

1937			1936		
Week ended		tons	Week ended		tons
3rd July	..	446	4th July	..	688
10th „	..	489	11th „	..	690
17th „	..	466	18th „	..	617
24th „	..	480	25th „	..	387
31st „	..	432	1st August	..	653

MANGELS.—Growth was inclined to be slow during the wet and cool weather but the recent sunshine has proved beneficial and the crop is now progressing satisfactorily.

TURNIPS.—The rains brought this crop on rapidly but interfered with singling and after cultivation, with the result that weeds made headway and were difficult to suppress. As a general rule the roots have made a fairly steady growth and the recent sunshine has brought about a further marked improvement in their condition. In some fields, however, where singling was done under damp conditions the crop is reported to be irregular and stunted in appearance and the difficulties experienced in the after cultivation of the drills is reflected in the weedy state of many fields.

HAY.—The greater portion of upland hay has now been saved and is in cocks. Early cut hay which was lying on the fields suffered from weathering, whilst the inclement weather also seriously interfered with the cutting and handling of the crop during the greater part of July. The arrival of summer-like weather was, therefore, greatly welcomed for this work, and much progress has been made since the end of July under the ideal conditions prevailing. In regard to the hay which was saved during the damp weather last month, it is feared that it will be only of medium quality, but early cut hay saved during the dry weather of June was of good quality, and there is every likelihood that the late-cut seed hay and meadow hay will be quite good this year. Although the stems were inclined to be a bit woody, the recent bottom growth will have improved the quality of late-harvested hay, more especially of meadow hay, and the general prospects of good crops of high quality hay are, at the moment, exceptionally bright.

Upland hay was unaltered in quantity on the month, and prices cheapened by 1/1½d. to 76/- per ton. No meadow hay was marketed during July.

LIVE STOCK.

CATTLE.—As a general rule store cattle made a fair thrive during July, but their progress would have been rather more noticeable had weather conditions been more congenial. Except in the case of the relatively small number of animals already referred to which have been affected by the more or less common complaints, such as “hoose” and “red water”, the health of the herds was normally good. As will be observed from the statement of the numbers of livestock in Northern Ireland at the 1st June last, on page 172, the total number of cattle in the country is smaller than a year ago, and the principal reductions occurred in the numbers of in-calf heifers and cattle two-years old and over. This decline in the cattle population has been reflected for some time now in the dearth of stores, which in turn has tended to restrict the

extent of beef production. None the less, graziers have kept the demand for fat stock fairly well satisfied, although perhaps the standard of quality of much of the grass-fed stock leaves something to be desired.

In this connection, it may be mentioned in passing that there seems to be a tendency for some feeders to present their animals for the subsidy without due regard being paid to the fact that a little extra time and trouble to complete the finishing of their cattle would have brought an increased reward, not only to the owner, but would have redounded to the interests of the industry as a whole. Incidentally, the terms of the new Subsidy Scheme now in operation, which is referred to on page 174, will encourage producers in this direction, since the super-grade quality subsidy of 7/6d. per cwt. is a very attractive proposition. During July, it was noted that a larger number of feeders were feeding their cattle with meals and concentrates in order that they might be put on the market in better finish.

Dairy cattle, generally, have been maintained in a healthy state, and calving was fairly normal. There were, however, a fair number of complaints of cows returning to service, and mastitis (or felon) was understood to be prevalent among some herds. Smaller offerings of store and fat cattle made a fairly satisfactory trade, but prices tended easier, especially towards the close of the month. Dairy stock were also in smaller number, and best quality animals were selling readily at fully late rates.

SHEEP.—Sheep are in fairly good condition, and except in the case of those affected with maggots which continued to be a source of trouble to many flock owners, the health of the flocks is normal. Lambs made a fair thrive during the inclement weather, but this year's crop appears to be a little less forward than usual at this time of the year—probably as the result of the severe weather experienced earlier, and in some cases on account of the increased number of "doubles". Medium supplies of sheep at fairs last month were in good request, especially in the case of animals fit for butchering. Fat lambs, especially, were a firm trade, and the limited supplies were readily absorbed at recent satisfactory prices.

PIGS.—Supplies of young pigs at fairs last month were a little smaller than usual, and trade ruled steady at firm rates. The best types of breeding sows were selling fairly well at prices ranging from £5 to £9 according to age and quality, and in the case of a few in-pig animals up to £12 each; inferior types were neglected, and it was understood that the slaughtering of sows, which had ceased to prove profitable as breeders, was on the increase. The mating of young sows, on a fairly large scale, was another feature of last month. Supplies of dead pigs at markets during the month were fully sufficient for the demand, which ruled only moderate at fixed prices.

HORSES.—Trade for horses was more limited in scope during July, on account of the scarcity of good, sound farm horses, which remained in keen request at late rates of from £40 to £50 each. Second-class farm horses ranged in price from £20 to £35 each.

MILK.—The milk yield appears to have remained stationary on the month, and was, therefore, about normal for the time of the year. Supplies for creameries near the sea-side were slightly affected by the increased demand in the liquid market due to the holiday season.

Creameries paid from 3½d. to 4½d. per gallon for milk delivered, the separated milk being returned to the farmer. The rate of equalisation payments for milk produced in Northern Ireland, and delivered to creameries for manufacturing purposes, was determined at 0.70d. per gallon for the month of June, 1937, in accordance with the Milk and Milk Products Act (Northern Ireland), 1934. It should be noted that under the Regulations, creameries are required to distribute the equalisation payments in accordance with the butter-fat content of the milk received from each supplier.

THE COST OF LIVING INDEX FIGURE.

At 1st July, 1937, the cost of living index figure was 55, or three points above that for the previous month. The figure at 1st July, 1936, was 46.

THE MARKETS DURING JULY.

There were increased supplies of home-grown vegetables marketed last month, and price movements generally indicated a slightly firmer tendency. Pamphrey rose in price by 2¼d. to 1/2¼d. per dozen, leeks by 1¼d. to 8d. per bunch, and parsley by 4¼d. to 10½d. per bunch. New season's supplies of carrots, parsnips and garden turnips were marketed in Belfast during the month, and carrots fetched from 8d. to 10d. per bunch, parsnips 6d. to 8d. per bunch, and garden turnips 5d. to 8d. per bunch. Farmers' butter recorded a slight decrease in supply compared with a month ago. Print butter was ¼d. dearer at 1/1¼d. per lb., but lump was unaltered in price at 11¼d. per lb. There was a marked decline in supplies of hen eggs during July, and duck eggs were also much less plentiful. Prices improved on the month by 2¼d. to 9d. per lb. for hen eggs, and by 1/8½d. to 9/1½d. per 120 for duck eggs. In the poultry markets hens and chickens were less numerous than in June, but ducks increased in supply. Hens and chickens were 1¼d. and ¾d. cheaper on the month at 1/6½d. and 2/5d. each respectively, while ducks were 4d. dearer at 2/7d. each. Supplies of long unwashed wool marketed in July recorded an appreciable decrease, but mountain wool was more plentiful. Long wool was ¼d. dearer at 1/0¾d. per lb., and mountain wool was firm in price at 11d. per lb.

PRICES OF AGRICULTURAL PRODUCE.

Table showing the average prices of agricultural produce in Northern Ireland during the three months ended 30th June, 1937, together with comparative figures for the same period in 1936, and the average prices ruling during the second quarter of the years 1911-1913:—

COMMODITY.	Quarter ended 30th June,			Percentage increase or decrease in price as compared with the corresponding period 1911-13.	
	NORTHERN IRELAND.		ULSTER	2nd Quarter, 1937	2nd Quarter, 1936
	1937	1936	1911-13		
Oats (White) per cwt.	£ s. d.	£ s. d.	£ s. d.	%	%
Potatoes do	0 8 2½	0 5 4½	0 7 4	+11.89	-26.7
Hay, Clover do	0 5 0½	0 3 7	0 3 10	+31.52	-6.5
" Meadow do	0 3 9	0 3 4	0 3 6	+7.14	-4.8
Calves (Young) per head	0 2 10½	0 2 7	0 3 4	-13.13	-22.5
Store Cattle, 6-12 months	2 18 3	1 15 3	2 1 4	+40.93	-14.7
" 1-2 years	8 1 6	6 14 2	5 8 8	+48.62	+23.5
" 2-3 years	10 12 2	9 2 3	8 2 1	+30.90	+12.4
Fat Cattle	13 1 0	11 7 8	10 11 0	+23.70	+7.9
" Cows and Bulls	16 6 3	13 18 4	14 8 9	+12.99	-3.6
Springers (Cows and Heifers)	12 9 9	11 4 5	13 16 2	-9.57	-18.7
Milch Cows (down calved)	16 4 0	14 7 8	14 19 9	+8.09	-4.0
Lambs (under 12 months)	15 0 4	13 11 4	13 17 4	+8.29	-2.2
Fat Sheep, 1-2 years	1 16 7	1 9 8	1 9 8	+23.31	-
" over 2 years	2 2 2	1 19 5	2 2 10	-	-8.0
Sows for Breeding	6 11 9	1 14 0	2 5 4	-6.99	-25.0
Young Pigs, 8-10 weeks old	1 9 9	6 15 9	5 19 0	+10.71	+14.1
Pork per cwt.	†3 6 1	†1 11 2	1 17 4	+8.84	+14.0
Butter, Farmers "	5 11 8½	†2 15 3	2 17 10	-	-
Hen Eggs per lb.	0 0 5½	5 10 4	4 16 10	+15.38	+13.9
		0 0 5½	*0 7 6	-	-

* All Ireland price per 120.

† Average prices calculated from purchase and grading statements, allowance being made for levy and contribution charges.

It is some considerable time since agricultural commodity prices have recorded such a generally marked improvement on the year as they do in the above table. Looking back over recent records, it was noted that not since the year 1929 have prices generally been ruling at such high levels in the second quarter of the year. It will be remembered that the total production of agricultural crops in 1936 recorded a decrease on the year, chiefly as the result of the decline in the total area under tillage, and it was natural, following a severe winter when feeding costs were high, that agricultural prices would rise. Figures shown above for the second quarter of this year have accordingly recorded a general improvement on those for the preceding quarter, more particularly in the case of all cattle, potatoes, and white oats. Notwithstanding the high costs of feeding, the live stock industry, as a whole, is in a much stronger position than for many years, and farmers have greatly benefited from the increased prices ruling since the commencement of the year, as well as from the additional benefits obtained through the Cattle Subsidy.

Another item of particular importance was the improved prices ruling for potatoes, and, although total shipments last season were down on the year by approximately 40,000 tons, the financial results were much more satisfactory for growers.

Sheep and lambs continued to make profitable returns, and for the classes listed above, further price rises are recorded. Young pigs were a little cheaper on the year, probably as a result of an increase in the population, and with prices of pork related to costs of production, producers were in the enviable position of being assured of reasonably remunerative returns. Prices of farmers' butter and hen eggs were firmly maintained at last year's seasonal levels.

THE APPLE CROP PROSPECTS.

The position in regard to this year's crop of apples in Northern Ireland has not greatly altered since the previous statement was made in the July issue of this Report, and there are good crops of apples in most orchards, but, unfortunately, in many the fruit has been damaged by aphid attack where winter tar oil spraying was omitted. In these orchards the quality of much of the fruit will be inferior, as the apples are generally small in size and badly blemished. Some orchards that were sprayed with tar oil distillates during the winter months, and were until comparatively recently free from aphid attack, are now affected by the spread of aphid from orchards in the immediate vicinity that had more or less succumbed to attacks of this pest through the failure on the part of the owners to take the necessary preventive measures. It was also learned that summer spraying with Bordeaux Mixture for the control of apple scab disease has been very indifferently carried out in many orchards and it is feared that the quality of the crop may suffer in consequence. In general, therefore, it may be concluded that, whilst the apple crop is well up to the standard of previous years in regard to quantity, the quality of much of the fruit will probably fall below the average standard in consequence of the neglect of some growers to carry out winter and summer spraying in an effective manner.

The latest information issued by the Ministry of Agriculture and Fisheries concerning the apple crop in England is based on information collected at the 30th July last, and is as follows:—

APPLE CROP.—The yield of crops of the principal "Early Cooking" varieties, and also of "Bramley's Seedling" and "Cox's Orange Pippin", is likely to be light to fair generally; a good crop of "Lord Derby" is, however, forecast for Kent. Crops of the "Worcester Pearmain" variety are likely to be fair to good in most districts.

In the following tables are shown the index figures of probable yield in 1937 for the principal districts. The scale on which the index figures are based is as follows:—

- 81-100=a "full" crop.
- 61- 80=a good crop.
- 41- 60=a fair crop.
- 21- 40=a light crop.
- 0- 20=a very light crop.

EARLY COOKING VARIETIES (including "LORD DERBY").—E. Cornwall, 35-40; Devon, 55; Hereford and W. Gloucester, 25; Evesham and Pershore area—very patchy—50; W. Sussex, 55; E. Sussex, 50; Kent "Lord

Derby", 75; Others, 50; Essex, 40; Cambs. "Lord Derby", 50; Others, 30; Wisbech and W. Norfolk, 15; E. Norfolk,—patchy—40-45; Lincs. (Holland), 15.

"BRAMLEY'S SEEDLING".—E. Cornwall, 30-35; Devon, 35; Hereford and W. Gloucester, 20; Evesham and Pershore area, 25; W. Sussex, 50; E. Sussex, 45; Kent, 45; Essex, 45; Cambs., 15; Wisbech and W. Norfolk, 10; E. Norfolk, 35-40; Lincs. (Holland), 5.

"WORCESTER PEARMAIN".—E. Cornwall, 30-35; Devon, 55; Hereford and W. Gloucester, 45; Evesham and Pershore area, 55; W. Sussex, 60; E. Sussex, 65; Kent, 70; Essex, 55; Cambs., 60-65; Wisbech and W. Norfolk, 60; E. Norfolk, 60.

"COX'S ORANGE PIPPIN".—Hereford and W. Gloucester, 30; Evesham and Pershore area, 35; W. Sussex, 50; E. Sussex, 45; Kent, 45; Essex, 25; Cambs., 40; Wisbech and W. Norfolk, 20; E. Norfolk, 55.

AGRICULTURAL STATISTICS FOR NORTHERN IRELAND, 1936-37.

Preliminary Statement of Acreage under Crops and numbers of Live Stock in Northern Ireland at 1st June, 1937, with comparative figures for the year 1936.

(The figures for the year 1937 are subject to revision).

ACREAGE UNDER CROPS IN NORTHERN IRELAND.

	1937	1936	Increase (+) or decrease (-) as between 1936 & 1937	
Corn Crops.	Acres	Acres.	Acres.	%
Wheat	4,352	6,871	- 2,519	- 36.7
Oats	256,918	265,042	- 8,124	- 3.1
Barley	2,773	2,823	- 50	- 1.8
Rye	200	274	- 74	- 27.0
Beans and Peas	498	550	- 52	- 9.5
Total extent under Corn crops ..	264,741	275,560	- 10,819	- 3.9
Green Crops.				
Potatoes	125,426	131,740	- 6,314	- 4.8
Turnips	28,660	31,287	- 2,627	- 8.4
Mangels	1,097	1,173	- 76	- 6.5
Cabbage	1,574	1,371	+ 203	+ 14.8
Other Green Crops	1,461	1,846	- 385	- 20.9
Total extent under Green Crops	158,218	167,417	- 9,199	- 5.5
Flax.	19,092	25,376	- 6,284	- 24.8
Fruit.	7,798	8,450	- 652	- 7.7
Total extent under Corn and Green Crops, Flax and Fruit	449,849	476,803	- 26,954	- 5.7
Hay.				
Rotation	212,326	205,445	+ 6,881	+ 3.3
Permanent	218,422	210,236	+ 8,186	+ 3.9
Total extent under Crops ..	880,597	892,484	- 11,887	- 1.3

NUMBERS OF LIVE STOCK IN NORTHERN IRELAND.

	1937	1936	Increase (+) or decrease (-) as between 1936 and 1937.	
	No.	No.	No.	%
Cattle.				
Milch Cows	237,287	249,802	- 12,515	- 5.0
Heifers in Calf	22,648	25,128	- 2,480	- 9.9
Other Cattle—				
Two years old and upwards	79,069	86,099	- 7,030	- 8.2
One year old and under two years	193,629	198,876	- 5,247	- 2.6
Under one year	197,583	209,748	- 12,165	- 5.8
Total number of Cattle ..	730,216	769,653	- 39,437	- 5.1
Sheep.				
Ewes for breeding purposes ..	376,915	381,526	- 4,611	- 1.2
Other Sheep—				
One year old and upwards	45,993	49,930	- 3,937	- 7.9
Under one year	405,944	403,298	+ 2,646	+ 0.7
Total number of Sheep ..	828,852	834,754	- 5,902	- 0.7
Pigs.				
Sows for breeding	54,331	56,509	- 2,178	- 3.9
Other Pigs—				
Six months old and upwards	46,832	34,139	+ 12,693	+ 37.2
Over three months and under six months	199,939	170,953	+ 28,986	+ 17.0
Under three months	268,373	260,053	+ 8,320	+ 3.2
Total Number of Pigs	569,475	521,654	+ 47,821	+ 9.2
Goats and Kids.	35,527	39,899	- 4,372	- 11.0
Horses.				
Used in Agriculture	80,459	81,309	- 850	- 1.0
Unbroken Horses—				
One year old and upwards	6,379	5,565	+ 814	+ 14.6
Under one year	4,104	3,962	+ 142	+ 3.6
Mules and Jennets	198	177	+ 21	+ 11.9
Asses.	7,446	7,362	+ 84	+ 1.1
Poultry.				
Turkeys	420,297	389,273	+ 31,024	+ 8.0
Geese	111,573	139,017	- 27,444	- 19.7
Ducks	427,968	498,727	- 70,759	- 14.2
Ordinary Fowl	9,219,565	9,542,730	- 323,165	- 3.4
Total Number of Poultry ..	10,179,403	10,569,747	- 390,344	- 3.7

THE CROPS.

The agricultural statistics for Northern Ireland for 1937 show, with one minor exception, a reduction in the area of all crops as compared with 1936. It is apparent that the extremely wet and inclement weather which was experienced in the autumn and spring gravely interfered with the sowing of crops. The principal reduction in acreage is in the case of oats, where the area sown is 256,918 acres this year as compared with 265,042 acres in 1936. This reduction of 8,124 acres in the area under oats is, however, proportionately small (3.1 per cent.) compared with the reduction of 36.7 per cent. in

the area under wheat, which has fallen from 6,871 acres to 4,352 acres, and the reduction of 24.8 per cent. in the flax acreage which has declined from 25,376 acres to 19,092 acres. The extent under potatoes this year is 125,426 acres as against 131,740 acres in 1936.

The total reduction in the area under tillage is 26,954 acres, the tilled area in 1937 being 449,849 acres as against 476,803 acres a year ago. There has, however, been an increase of 15,067 acres in the area being cropped for hay which is 430,748 acres this year as against 415,681 acres in 1936.

LIVE STOCK.

There is a reduction in the total numbers of cattle, sheep and poultry, but increases are recorded in the case of horses and pigs.

All classes of cattle show a reduction compared with 1936. Milch cows have fallen in number from 249,802 to 237,287, or by 5 per cent., and heifers in calf from 25,128 to 22,648, or by 9.9 per cent. The total cattle population has declined from 769,653 to 730,216, or by 5.1 per cent. There can be little doubt that one of the principal factors accounting for the reduction has been the remunerative prices realised by farmers for the sale of milch cows and fat cattle in recent months.

The reduction in the number of sheep is slight (less than one per cent.) the total number falling from 834,754 in 1936, to 828,852 this year. With the exception of 1936 the latter figure is the highest ever recorded in Northern Ireland.

The number of pigs at the 1st of June was 569,475 as compared with 521,654 a year previously, and 457,878 at the 1st June, 1935. It is noteworthy, however, that the rate of increase in the pig population, which has been phenomenally great during the past few years, is now slowing down, and a decrease is recorded in the number of sows which have fallen from 56,509 to 54,331.

The number of horses used in agriculture has fallen from 81,309 to 80,459, but an increase has occurred in the number of unbroken horses from 9,527 to 10,483, indicating a continued revival in horsebreeding.

Turkeys have increased from 389,273 to 420,297, or by eight per cent., but geese and ducks have declined by 27,444 and 70,759 respectively. The great bulk of the poultry in Northern Ireland are, of course, ordinary fowl, which have declined from 9,542,730 to 9,219,565; the reduction has been entirely in the number of birds hatched this year, and here again the inclement weather in the spring appears to have been one of the principal factors responsible for the reduction in the number of birds reared. The total poultry population remains well above the ten million level which was first attained in 1933.

MARKETING SCHEMES.

THE AGRICULTURE ACT, 1937.

(1) OATS AND BARLEY SUBSIDY.

The Agriculture Act, 1937, which has just become an enactment of the United Kingdom, provides, amongst other things, for the payment of a subsidy to growers of oats and barley in certain circumstances, and will apply to Northern Ireland. A brief explanation of the way in which the Act will operate is given hereunder.

CROPS ELIGIBLE FOR SUBSIDY.—All crops of oats or barley grown on one statute acre or more, and harvested as grain in each of the five years 1937 to 1941, will be eligible for subsidy payment except those grown on a farm for which the owner elects to receive for that year a wheat deficiency payment. In no case will a farmer receive both the subsidy payment on oats and barley and the deficiency payment in respect of wheat, but in each year the grower will be given the opportunity of choosing between oat and barley subsidy and wheat deficiency payments. The subsidy will, however, be payable on oats or barley grown with any other grain crop.

OATS OR BARLEY GROWN WITH OTHER CROPS.—It has been mentioned above that the subsidy will be payable on crops of oats or barley grown with other grain crops. The rate of subsidy payable on oats or barley so grown will be calculated on the proportion of oats or barley seed in the total mixture, e.g., if 6 stones of oats and 18 stones of beans are sown to the acre, then the subsidy payment will beat the rate per acre of $\frac{1}{4}$ th of the amount payable on an acre of oats grown alone. In cases, however, where oats or barley is sown as a shelter crop, e.g., with grass seed, the subsidy will be payable on the total area of oats or barley harvested as grain.

AMOUNT OF SUBSIDY.—The subsidy payable in respect of each complete statute acre of oats and barley will be at the rate of 6 times the difference between 8/- and the average price of home-grown oats harvested in the United Kingdom, and sold in the seven months, September to March, provided (1) that the average price for the seven months' period is not greater than 7/7 per cwt., and (2) subject to a maximum subsidy of £1 per statute acre. In effect this means that if in the first year the United Kingdom price of oats for the seven months September to March, is above 7/7 per cwt. no subsidy will be payable, but if the price is 7/7 per cwt. or less, a subsidy payment of an amount not less than 2/6 per statute acre, or more than £1 per statute acre will fall to be made. A subsidy of £1 per statute acre would

mean that the United Kingdom price of oats was as low as $4/8$ per cwt. (the subsidy would then be 6 times the difference between $8/-$ and $4/8=6$ times $3/4=£1$). In future years a rate of payment slightly below $2/6$ per statute acre may occur if the total acreage of either oats or barley exceeds by more than $1/10$ th the acreage eligible for subsidy in 1937.

Farmers will, no doubt, wonder why the amount is six times the difference between the standard price and the United Kingdom price. The reason is that the bulk of the oats and barley grown in the United Kingdom is used on the farm, and it has been estimated that over the United Kingdom as a whole the average quantity of oats or barley sold off farms amounts to only 6 cwt. from each statute acre grown. It will, therefore, be seen that the subsidy is related to the quantity of oats or barley estimated to be sold off farms in the United Kingdom.

Furthermore, as the bulk of the sales of home-grown corn take place during the seven months, September to March, this period has been adopted for determining the average price. There is the advantage that by taking this period, subsidy payments can be made at an earlier date than if a twelve months' period was adopted.

STANDARD ACREAGE OF OATS OR BARLEY.—For the purpose of the subsidy the acreage of oats and barley qualifying for subsidy payments in 1937 will constitute the basis of the "standard acreage" of the two crops respectively, and the standard acreage on which subsidy payments will be payable in the years 1938 to 1941 will be $11/10$ ths of that acreage. The standard acreages for oats and for barley will be separate. If in any year after 1937 the total United Kingdom acreage under oats or barley eligible for subsidy exceeds by more than $1/10$ th the acreage under either of those crops eligible for subsidy in the year 1937, then the amount of the subsidy will be reduced by that proportion so that the total payments will not exceed the amount which would have been payable if the full rate of subsidy payment had been applied to the standard acreage, i.e., the 1937 acreage eligible for subsidy increased by $1/10$ th.

There is a further restriction on the payment of subsidy on crops of which the yield is abnormally low by reason of the unsuitability of the land for growing oats or barley, or by negligence in the growing or harvesting of the crop. In such cases the amount of the subsidy may be reduced or withheld.

FARMERS WITH 2 OR MORE SEPARATE FARMS.—The subsidy payment for oats and barley will be made in respect of lands farmed as a unit. In cases where a farmer operates two or more farms as separate units he will be able to choose wheat deficiency payments in respect of one or more of such farms, and oats and barley subsidy payments for the other farms. In no case, however, will

he receive both wheat deficiency payments and oats and barley subsidy payments in respect of the same farm. Furthermore, if two or more farms are operated as one unit, then the farmer must decide whether he will choose the wheat deficiency payment or the oat and barley subsidy payment in respect of such combined farms.

In any case of doubt as to whether farms are in fact farmed as separate units, the decision of the Minister in the matter is final.

INCREASE IN THE MAXIMUM QUANTITY OF WHEAT ON WHICH FULL RATE OF DEFICIENCY PAYMENT WILL BE MADE.—Under the Wheat Act, 1932, the maximum quantity of home-grown millable wheat on which the full rate of deficiency payment could be made was fixed at 27 million cwt. In recent years the quantity of home-grown millable wheat has exceeded this quantity, and the deficiency payment was reduced in proportion. This provision of the Wheat Act, 1932, has been amended so as to increase to 36 million cwt. the quantity of home-grown millable wheat on which the full rate of deficiency payment may in future be made. The quantity of home-grown millable wheat which may be sold before any consequential reduction in deficiency payment occurs will, therefore, be 36 million cwt., instead of 27 million cwt. as heretofore.

IMPORTANT NOTE TO GROWERS OF BOTH OATS OR BARLEY AND WHEAT.—As explained above, farmers who grow wheat as well as oats and barley must choose between subsidy payments for oats and barley and deficiency payments for wheat. Many considerations will affect the choice made by individual farmers; but it may be pointed out that if the prices of oats and wheat fall below the standard prices of 8/- and 10/- per cwt., by the same proportion then the subsidy on one acre of wheat is on the average roughly equivalent to the subsidy on 3 acres of oats or barley. This relationship on an acreage basis may give farmers a rough and ready guide towards making their decision, but it is necessary to remember that other factors have also to be taken into account. Thus the fall in oat prices in any one year may be greater than the fall in wheat prices, or vice versa. Again, there is the question of the yields obtained on different farms. A farmer who obtains high yields per acre of wheat has a greater incentive to choose wheat deficiency payments, since these payments are made in respect of his total sales of millable wheat, whereas in the case of oats and barley payment is strictly on an acreage basis independent of the yield of the crop.

THE PROCEDURE TO BE FOLLOWED BY FARMERS WHEN APPLYING FOR THE OAT AND BARLEY DEFICIENCY PAYMENT.

The person entitled to receive the subsidy payment in respect of oats and barley is the person who was the actual occupier of the farm on the 1st day of June in the year in which the oats or barley, on which subsidy payment is being made, were harvested.

APPLICATION NECESSARY.—In order to obtain the subsidy payment on oats and barley farmers will require to make application on a special form. This form will be distributed to every farmer during the month of September by members of the Royal Ulster Constabulary. The form must be signed by the applicant in the presence of a member of the Royal Ulster Constabulary, who must witness the signature of the applicant.

LATEST DATE FOR RECEIVING APPLICATIONS.—The application form when completed must be returned to the nearest Royal Ulster Constabulary barracks before the 30th September. This is the latest date for receiving applications, and in no circumstances will applications received after that date be admitted unless the Ministry is fully satisfied that the delay has been caused by circumstances over which the applicant had no control.

INFORMATION REQUIRED ON THE APPLICATION FORM.—The applicant will be required to state on the application form his full name and full postal address, including the name of the townland and the rural district. The applicant will also be required to give the exact situation of each farm in respect of which application is made, and state in respect of each farm the acreage of land actually under oats and under barley in each field. In any cases where oats or barley are grown with any other grain crop the acreage of the land under the mixed crop must be stated, together with the exact seeds mixture sown.

Each applicant will also be required to state whether he is growing wheat and must give the number under which he is registered with the Wheat Commission.

In addition each applicant will be required to state whether he has any other farm operated as a separate unit, and upon which oats, barley or wheat is being grown, and full particulars of such other farm or farms will be required to be given.

It should be particularly noted that—

(1) the subsidy payment will not be made in respect of oats or barley grown on less than 1 complete statute acre on any farm.

(2) the subsidy payment will be made only in respect of complete areas of one statute acre, no payment will be made in respect of parts of an acre, e.g., a farmer with $3\frac{1}{2}$ acres of oats will only receive the subsidy payment in respect of 3 acres.

LAND FERTILITY SCHEME.

GRANTS FOR LIME AND BASIC SLAG.

With a view to improving the productivity of the soil as a matter of national concern, a scheme will be put into operation in the near future under which grants will be given to farmers in Great Britain and Northern Ireland towards the purchase of lime and basic slag for use on their holdings. The grants will amount to not more than one-half the cost of lime, including transport, which is actually applied to the land, and to one-quarter the cost of basic slag similarly used, and will not be payable in respect of quantities less than two tons.

It should be noted that grants will not be payable in the case of lime or basic slag which is delivered before the date on which the scheme commences and which will be announced shortly, and further, that grants will not be paid for any lime or basic slag which is produced outside Great Britain or Northern Ireland.

It is hoped at an early date to make available for farmers, lists of persons and firms who are approved as suppliers of lime and basic slag. Farmers who wish to participate in the scheme must obtain their supplies from the persons on the approved list, otherwise grants will not be payable.

The lists will be posted at the following places:—

1. Police Stations.
2. Branches of Farmers' Unions.
3. Co-operative Agricultural Societies (including creameries).
4. Young Farmers' Clubs.
5. Milk Recording Associations.
6. County Agricultural Organisers' Offices.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.), 1934:—

GRADING AND PRICES OF PIGS.

Some slight modifications have been made recently as regards grading of pig carcasses and pig prices.

An amendment of the grading order which came into force on 1st August provided for the weight class c.1.0.21 to c.1.2.3 to be divided into two weight classes, viz., c.1.0.21 to c.1.1.13 and c.1.1.14 to c.1.2.3. The quality grades 1 and 2 within these weight limits remain unaltered, but Grade 3 now includes only pigs with definite fat measurements, instead of as previously all suitable bacon pigs outside the measurements for grades 1 and 2. Further grades, UL and UF, have also been introduced, and the position is set out in the following table:—

Dead Weight Classes.	QUALITY GRADES.				
	1	2	3	U.L.	U.F.
I. c1.0.21 to c1.1.13	Maximum back fat $1\frac{3}{16}$ ins.	Maximum back fat $1\frac{7}{16}$ ins.	Maximum back fat $1\frac{9}{16}$ ins.	Under $\frac{3}{8}$ in. back fat.	Over Grade 3 measure- ments.
II. c1.1.14 to c1.2.3	Maximum shoulder fat 2 ins.	Maximum shoulder fat $2\frac{1}{4}$ ins.	Maximum shoulder fat $2\frac{3}{8}$ ins.		
	Maximum loin fat $1\frac{1}{16}$ ins.	Maximum loin fat $1\frac{7}{16}$ ins.	Maximum loin fat $1\frac{9}{16}$ ins.		

It follows, of course, that prices have also been fixed upon this altered basis of grading.

Pig producers should note that until the end of the year the prices for pigs sold dead will be based upon the standard roll and ham pig price, which is calculated from ascertained prices of selected ranges of dried bacon and hams over a previous period of 4 or 5 weeks, and from the average prices, over a previous period of 16 weeks, of the standard feeding-stuffs ration. In the case of Wiltshire pigs sold alive, it has been arranged that the standard Wiltshire price payable to the producer will be at least 6/- per dead cwt. above the standard roll and ham price. Thus for the month of August the price of a Grade 2 or Grade B pig sold dead and falling within the weight limits of c.1.1.14 and c.1.3.14 is 66/9d. per cwt., while the Grade 2 price of a pig sold alive on direct contract falling within the weight limits c.1.0.21 and c.1.2.3 dead weight is 72/9d. per cwt.

It may be mentioned that the net prices paid by curers for pigs within these latter weight limits put into Wiltshire cure are based upon Wiltshire prices calculated from prices ruling in England and Wales over a previous period of 4 or 5 weeks.

PIG PRICES FOR AUGUST, 1937.

The following announcement was made by the Pig Industry Council for Northern Ireland, Stormont, Belfast.

PRICES FOR DEAD PIGS.

The prices per dead cwt. for dead pigs sold by producers to curers in Northern Ireland, in August, 1937, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Partly Black Pigs.
c.1.0.21 to c.1.1.13	65/9	62/9	59/9	55/9	5/- below relevant Grade Price.
c.1.1.14 to c.1.2.3	69/9	66/9	63/9	59/9	
Weight Class. (Dead Weight)	Grade A.	Grade B.	Grade C.	U.L. or U.F.	
c.1.2.4 to c.1.2.14	69/9	66/9	63/9	60/9	
c.1.2.15 to c.1.3.14	69/9	66/9	63/9	60/9	
c.1.3.15 to c.2.0.0	66/9	63/9	60/9	57/9	
c.2.0.1 to c.2.0.14	60/9	57/9	54/9	51/9	

Pig Carcases c.1.0.0 to c.1.0.20 :—62/9.

Authorised cuts :—

- (a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.
- (b) Broken ham (wet break)—12½% of the gross value of the carcase.
- (c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase weighing not less than c.1.0.21 or not more than c.2.0.14 is condemned and the existence of disease could not reasonably have been known to the producer before despatch to the curer the appropriate grade price shall apply. If the carcase is wholly condemned on account of disease, the existence of which could not reasonably have been known to the producer before despatch to the curer, the relevant Grade 2 or Grade B price shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcases weighing under c.1.0.0 or over c.2.0.14, and (b) pigs visibly diagnosable as diseased before despatch by the producer and subsequently condemned; emaciated or screw pigs; smelling pig carcases with definite indications of putrefaction, and pig carcases badly abused or damaged before being handed over by the producer to the curer.

PRICES FOR WILTSHIRE PIGS SOLD ON DIRECT CONTRACT.

In the case of pigs sold alive under direct contract to Wiltshire curers the prices per dead cwt. payable for pigs delivered in respect of the month of August, 1937, are as follows :—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Unsuitable.
c.1.0.21 to c.1.1.13	75/9	72/9	69/9	65/9	62/9
c.1.1.14 to c.1.2.3	75/9	72/9	69/9	65/9	62/9
	Grade A.	Grade B.	Grade C.	U.L. or U.F.	
c.1.2.4 to c.1.2.7	72/9	69/9	66/9	63/9	
c.1.0.0 to c.1.0.20	Suitable 64/9		Unsuitable 62/9		
Over c.1.2.7	On the same basis as pigs sold dead.				

**PRICES FOR LIVE PIGS SOLD TO THE PIGS MARKETING BOARD
(NORTHERN IRELAND).**

In the case of pigs sold alive to the Pigs Marketing Board during August, 1937, the prices, according to grade, are as follows:—

Live Weight.	Grade 1.	Grade 2.	Grade 3.	Unsuitable.
c.1.1.14 to c.1.2.13	48/6	48/6	48/6	47/-
c.1.2.14 to c.2.0.0	56/9	54/6	U.L. or U.F. 52/3 49/3 47/-	
c.2.0.1 to c.2.1.14	52/3	50/-	47/9	45/6
c.2.1.15 to c.2.2.7	50/-	47/9	45/6	43/3
c.2.2.8 to c.2.2.21	45/6	43/3	41/-	38/9

These prices do not apply to live pigs under c.1.1.14 or over c.2.2.21, live pigs intended for breeding, live boars, live suckled sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside the weights c.1.2.0. to c.2.2.21 can be sold only to the Board.

AUTHORISED DEDUCTIONS.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy and contribution at present amounting to 3/-.

In addition to this amount, a deduction of 4d. per pig may be made in the case of sales to curers to cover insurance, so that the producer will not suffer financial loss if the carcass is condemned as unfit for human consumption.

In the case of pigs sold to the Board, there is a deduction of 2/6d. per pig for marketing charges.

GRADING STATISTICS.

Table showing the percentages of pig carcasses falling within the weight and grade classes indicated during June, 1937.

Under c.1.0.21.				c.1.0.21. to c.1.2.3.						Totals.			
Suitable		Unsuitable		Grade 1		Grade 2		Grade 3					
1.28		.21		2.55		3.29		3.41		.05			
10.79													
Grade A.				Grade B.				Grade C.					
1	2	3	4	1	2	3	4	1	2	3	4		
9.37	18.71	3.37	.75	7.89	21.0	5.47	1.55	3.32	9.64	1.86	.53	83.46	
UNGRADED CARCASSES.													
Under Grade A measurements. U.L.		Over Grade C measurements U.F.		Wholly condemned. U1.		Wholly black, injured or damaged. U2.		Overweights, boars, sows, etc. X.		Partly Black. Y.			
.04		3.78		.08		.56		1.25		.04		5.75	
Total												100%	

These figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry.

The average price paid to producers for pig carcasses during the month of June works out at £5 14s. 4d.; the average weight at c.1 2q. 23lb.; and the average price of pork at £3 6s. 11d. per cwt.

COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration for the sixteen weeks' period ended 24th July, was 10/1½d. This figure has been calculated by the Ministry from returns collected from 10 representative centres in Northern Ireland.

The following is the ration upon which the feeding cost is based:—

Maize Meal	...	...	...	30%
Barley Meal	...	...	...	30%
Pollards (White)	...	...	...	20%
White Bran	...	...	...	10%
Meat Meal (60% Protein)	...	...	...	10%

LEVIES FOR PIG PRODUCERS.

As and from Monday, 19th July, a special trading levy of 2/- per pig is chargeable in the case of sales of pigs by producers to bacon-curers, or to the Pigs Marketing Board. This levy is necessary to meet trading losses incurred by the Board. Before that date the administrative levy or contribution amounted to 1/- per pig, and the total amount of levies now payable to the Pigs Marketing Board will, therefore, be 3/- per pig. In addition, the insurance fee of 4d. per pig will continue to be deducted by licensed bacon-curers in the case of pigs bought by them, and the sum of 2/6 per pig marketing charges will be deducted by the Pigs Marketing Board in the case of live pigs sold to the Board.

MILK AND MILK PRODUCTS ACT (N.I.), 1934 AND 1936.

APPEAL OF COUNTY DONEGAL MILK VENDORS.

On the 19th July, 1937, judgment was delivered by the House of Lords dismissing the Appeal of Mr. Samuel Gallagher, dairy farmer, of Monglass, Bogay, County Donegal, Irish Free State, from an order of the Court of Appeal in Northern Ireland.

Lord Atkin, in delivering judgment, said that the case involved questions as to the construction and validity of the Milk and Milk Products Act passed by the legislature of Northern Ireland in 1934.

The appellant was one of several farmers whose farms were situated in the county of Donegal, outside the territory of Northern Ireland, but within a few miles of the boundary. For a considerable time before 1934 they had been in the habit of selling their milk in the city of Londonderry, which appeared to have been their natural market. In 1935 Mr. Alexander, a solicitor practising in Londonderry, having also a dairy farm in county Donegal, having asked for a producer's licence, and being refused, applied for a *mandamus* to the Minister to grant him a licence. The rule was discharged by the King's Bench Division and that decision was affirmed by the Court of Appeal. The ground taken by the Minister and upheld by the Courts was that it was impossible to apply the Act to producers whose premises were outside Northern Ireland territory, and that such persons were not entitled to a licence under the Act. It was open to the appellant to dispute that decision before that House. It was but faintly argued. Their Lordships were all agreed that the decision of the Courts of Northern Ireland was right for the reason given, and he need say no more about it. It was also suggested before their Lordships that if that Act did not permit a farmer whose farm was outside Northern Ireland to obtain a licence it did not apply to them at all, and that therefore he could sell without any restrictions. He (his Lordship) thought that the Act must be construed as

imposing control over every person who within Northern Ireland sold or exposed for sale milk, whether the milk was produced within or without Northern Ireland territory. That point also failed.

CONSTITUTIONAL ISSUE

The questions as to construction of the Act were thus disposed of, and there remained the important issue as to the constitutional validity of the Act. That was attacked by reference to the terms of section 4 of the Government of Ireland Act, 1920, of which the provisions relating to Northern Ireland remained in force. That section stated (1) :—

Subject to the provisions of this Act . . . the Parliament of Northern Ireland shall have power to make laws for the peace, order, and good government of . . . Northern Ireland with the following limitations, viz., that they shall not have power to make laws except in respect of matters exclusively relating to the portion of Ireland within their jurisdiction, or some part thereof, and (without prejudice to that general limitation) that they shall not have power to make laws in respect of the following matters in particular, viz. . . . (7). Trade with any place out of the part of Ireland within their jurisdiction, except so far as trade may be affected by the exercise of the powers of taxation given to the said Parliament or by regulations made for the sole purpose of preventing contagious disease, or by steps taken by means of inquiries or agencies out of the part of Ireland within their jurisdiction for the improvement of the trade of that part or for the protection of traders of that part from fraud.

It was said that the provisions of the Milk Act interfered with—indeed, put an end to—the trade in milk between the farmers of Donegal and customers in Derry; and that therefore they offended against the express limitations imposed by section 4 (7). The short answer to that was that the Milk Act was not a law “in respect of” trade, but was a law for the peace, order, and good government of Northern Ireland “in respect of” precautions taken to secure the health of the inhabitants of Northern Ireland by protecting them from the dangers of an unregulated supply of milk. Those questions affecting limitation on the legislative powers of subordinate Parliaments or the distribution of powers between Parliaments in a federal system were now familiar, and he did not propose to cite the whole range of authority which had largely arisen in discussion of the powers of Canadian Parliaments. It was well established that one had to look at the “true nature and character of the legislation,” “the pith and substance of the legislation.”

If on the view of the statute as a whole it was found that the substance of the legislation was within the express powers, then it was not invalidated if incidentally it affected matters which were outside the authorized field. The legislation must not under the guise of dealing with one matter in fact encroach

on the forbidden field. Nor was one to look only at the object of the legislator. An Act might have a perfectly lawful object; for example, to promote the health of the inhabitants, but might seek to achieve that object by invalid methods, for example, a direct prohibition of any trade with a foreign country. In other words, clauses of an Act might certainly be considered to see whether they were passed "in respect of" the forbidden subject. In the present case any suggestion of an indirect attack on trade was disclaimed by the appellant. There could be no foundation for it. The true nature and character of the Act, its pith and substance, was that it was an Act to protect the health of the inhabitants of Northern Ireland, and in those circumstances, though it might incidentally affect trade with county Donegal, it was not passed "in respect of" trade, and was therefore not subject to attack on that ground. He was of opinion, therefore, that the appeal should be dismissed, with costs.

The other noble and learned lords (Lord Thankerton, Lord MacMillan, Lord Wright, and Lord Maugham) concurred.

The Appeal was accordingly dismissed.

MILK INDUSTRY ASSISTANCE GRANT.

Readers attention is drawn to an error in the article entitled "Milk Industry Assistance Grant," which appeared in the Monthly Report of July. In the last paragraph on page 124 it states that it has been found necessary to extend the assistance to the industry for a further period of twelve months from the beginning of September, 1937, to 31st August, 1938. The period over which the grant is being extended is actually the period of twelve months beginning October 1st, 1937, and ending September 30th, 1938. It is estimated that the payments that will be available for distribution to creameries during this period will be in the region of £67,000.

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935.

The total amount of payments made under the Acts to Northern Ireland owners up to and including 31st July, 1937, was £738,251 7s. 9d., and was in respect of 353,755 animals sold on a live weight basis. These figures compare with a total sum of £2,414,691 6s. 3d. for 988,816 animals in Scotland, £7,640,958 12s. 6d. for 3,229,960 animals in England and Wales, and a total of £10,793,901 6s. 6d. for 4,572,531 animals for the whole of the United Kingdom.

The average payments made per head of cattle were as follow:—Northern Ireland, £2 1s. 9d.; Scotland, £2 8s. 10d.; England and Wales, £2 7s. 4d.; and for the whole of the United Kingdom, £2 7s. 2d.

THE FAT CATTLE SUBSIDY. NEW SCHEME COMMENCES ON 1st AUGUST.

Important changes have been made in connection with the fat cattle subsidy by the subsidy provisions of the Livestock Industry Act, 1937, which came into operation on the 1st August, although the general procedure for the issue of certificates will be continued on lines similar to those with which all concerned have become familiar. The Scheme will, in future, be administered by the Livestock Commission set up under the Livestock Industry Act, who will take over the duties of the Cattle Committee, the members of which have been appointed as members of the Livestock Commission. The Commission have re-approved the present Certification Centres, and have re-appointed the Ministry to administer the Scheme in Northern Ireland, with the Ministry's Veterinary Inspectors acting as certifying officers.

The New Regulations, Orders and Subsidy Scheme, approved by Ministers, have now been published, and these show the changes, as compared with the old Scheme which will apply as from the commencement of this month.

TWO GRADES.

Eligible animals will be divided into two grades to be known as "ordinary" grade and "quality" grade, and higher rates of subsidy will be payable in respect of quality grade animals than for ordinary grade animals. In addition, the rates of payment for home-bred animals of each grade will be higher than for imported animals of the same grade. Cow-heifers, as well as steers and heifers, will be eligible for ordinary subsidy, but quality subsidy will be limited to steers and heifers.

The rates of subsidy in respect of animals certified on a live-weight basis (i.e., certified at a Live-weight Centre) will be:—

Ordinary grade home-bred animals—5/- per cwt. live weight.

Ordinary grade imported animals—2/6 per cwt. live weight.

Quality grade home-bred animals—7/6 per cwt. live weight.

Quality grade imported animals—5/- per cwt. live weight.

ORDINARY GRADE.—The animal shall be reasonably well finished, the fat covering shall be fair, and there shall be a reasonable amount of cod (or udder) fat, the flesh shall be of average thickness, and the animal shall be likely, so far as conformation and finish are concerned, to furnish a carcass up to the standard of "Good" National Mark Beef, and shall in the opinion of the Certifying Authority have a killing-out percentage of not less than 54%, i.e., 60½ lb. carcass weight to one cwt. live weight.

QUALITY GRADE.—The animal shall be compact, heavily and uniformly fleshed throughout, and relatively short in the leg; the hindquarters, buttocks, loins and ribs shall be well developed and rounded; the animal shall be ripe,

with excellent finish; the fat covering shall be uniform, and the cod (or udder) fat shall be adequate and firm, and the animal shall be likely, so far as conformation and finish are concerned, to furnish a carcass up to the standard of "Select" National Mark Beef, and shall have a killing-out percentage of not less than 57%, i.e., 64 lb. carcass weight to one cwt. live weight.

MINIMUM AND MAXIMUM WEIGHTS.—No subsidy will be payable in respect of an animal weighing less than $6\frac{1}{2}$ cwt. live weight as compared with $5\frac{1}{2}$ cwt. under the old Scheme. In order to be eligible for quality grade, a heifer must weigh not less than 7 cwt. live weight, and a steer not less than $7\frac{1}{2}$ cwt. live weight.

For the purpose of subsidy payments any weight over 13 cwt. live weight, will be disregarded in the case of an ordinary grade animal, and any weight over 12 cwt. live weight will be disregarded in the case of a quality grade animal.

REVISED CONDITIONS OF ELIGIBILITY.—Under the new Scheme a female animal may not be certified if it appears to the Certifying Authority to be pregnant, whilst under the old Scheme an animal might be certified if it did not appear to be more than five months advanced in pregnancy. As under the old Scheme, a cow-heifer must not have more than six permanent incisor teeth, but in addition, in future it must still retain at least one calf tooth. A male animal may not be certified if by reason of late or ineffective castration it shows the physical characteristics of bulls; under the old Scheme the corresponding requirement was that the animal should have been castrated before obtaining the age of nine months.

As before an imported animal must have been in the United Kingdom for three months before it may be certified as eligible for subsidy payment.

Under the new Scheme, the qualification for payment of subsidy on an eligible animal is that the animal shall be either sold or slaughtered by or on behalf of the producer claiming payment, whereas under the old Scheme the qualification for payment of subsidy was the sale of the animal. As a result of this alteration a butcher who is also a producer of fat cattle may claim subsidy payments in respect of animals owned by him which he slaughters for his butcher's business. In such case the Certifying Officer should be consulted on the procedure.

The Certifying Authority will in future have power to refuse to examine an animal which is presented for certification in an unusually full condition, and to refuse to examine, or alternatively to make an appropriate deduction from the weight of, an animal presented for certification in an excessively dirty condition.

INCREASE IN CERTIFICATION FEES.—The fees payable by Northern Ireland producers in respect of the certification of their animals will be increased from 6d. to 1/- per animal.

AGRICULTURAL NOTES.

SEASONAL FARM NOTES.

HAY.—Field ricks of hay should be carted and stacked or stored in sheds as early in the season as possible. The practice of allowing the crop to remain in ricks in the fields too long results in the hay at the sides and bottoms of the ricks becoming damaged, and either unfit for feeding purposes, or materially reduced in feeding value. Furthermore, delay in removing field ricks prevents stock from being turned on and making full use of the aftermath.

Hay cut for seed-saving purposes should be threshed as soon as the crop is in a fit condition to permit of this being done. During dry weather the crop will be in a fit condition for threshing after a period of from a fortnight to three weeks in ricks or "huts". If the crop is allowed to remain in field ricks or "huts" for a prolonged period, discolouration of the seed, with a consequent reduction in market value, is liable to occur, particularly should periods of wet weather supervene. The seed should be stored under dry and well-ventilated conditions, on a loft, if available, and turned frequently to dry it thoroughly and to prevent heating from taking place.

SPRAYING OF POTATOES.—The second spraying of potato crops to prevent blight disease should be carried out as soon as possible, if not already done. One spraying is not sufficient to afford protection from the disease under Northern Ireland conditions, and failure to spray twice usually results in lower yields and in a greater proportion of diseased and unsaleable tubers in the crop. Late planted crops should receive special attention in regard to spraying, as otherwise they may be destroyed by the disease before the tubers are fully developed. Such crops should receive a third spraying about three weeks after the second spraying has been carried out. Particulars regarding the preparation and application of the spray mixtures recommended are given in Leaflet No. 50.

LIFTING OF EARLY POTATOES.—Crops of early varieties of potatoes should be lifted now as opportunity offers. The seed for next season's crop should be carefully selected at lifting time and stored in sprouting boxes. It is an advantage to leave the filled boxes in an open shed for some time so that the seed may be "greened" and hardened before being finally stored away.

CATCH CROPS.—Ground from which early potatoes have been dug can be profitably utilised by planting it now with cabbages to provide succulent food for stock next spring, at a time when roots are scarce and before the grazing season commences. Italian ryegrass is also a useful crop to grow for this

purpose, and on suitable ground will produce a heavy yield of succulent food. It should be sown at the rate of from 3 to 4 bushels per statute acre, and lightly harrowed in.

TURNIPS AND MANGELS.—These crops will benefit considerably from periodical cultivation between the drills where it is still possible to do so. During showery weather, when other urgent work on the farm cannot be carried out, weeds, such as redshank, should be pulled and the crops kept as clean as possible.

WEEDS.—If not already done, the destruction of noxious weeds should be carried out without further delay. Neglect to do so is likely to lead to a prosecution, besides increasing the numbers of the weeds in subsequent years.

Rushes in pasture should also be cut when time permits. Cutting twice in the year, in early spring and again during August, considerably reduces infestations of these weeds. Rushes which are cut during August should not be allowed to remain on the ground, but should be collected and burned, as otherwise, since many of the plants will have produced seed by this time of year, new infestations of the weeds may result. Owing to the risk of spreading rushes from seed, it is also unwise to use the weeds when cut for bedding material.

OATS.—In the earlier districts, oats will be ready for harvesting towards the end of August. It is a mistake to allow oats to become dead ripe before cutting; over-ripening before cutting leads to a loss of grain through shedding, a reduction in the feeding value of the straw, and, frequently, to increased difficulties in harvesting operations. It is, therefore, wiser to cut the crop when it is still showing a shade of green, and to allow full ripening to take place in the stook, than to postpone cutting until fully ripe.

BARLEY.—Crops of barley, particularly those intended for malting purposes, on the other hand, should on no account be cut until fully ripe. Unlike oats, barley will not ripen after it is cut, and the grain from crops which are cut before full ripening has taken place will be of inferior quality. When ready for cutting, the whole crop is dead white in appearance, with no trace of greenness in the straw, the heads are turned downwards, and the individual grains are hard and dry.

SEASONAL LIVESTOCK NOTES.

CATTLE.—Pastures deteriorate in feeding value at this time and, where aftermath is not available, the feeding of a meal mixture to maintain the milk yields of cows giving two gallons or more per day is necessary. A mixture of

equal parts crushed oats, maize meal and decorticated earthnut cake, fed at the rate of 3 lb. per head daily for each gallon of milk produced over two gallons, is suitable for this purpose.

Where aftermath is available, it affords a useful supplement to pastures at this time, and obviates the necessity of feeding meals except in the case of heavy yielding cows. It is necessary, however, to exercise care when turning stock on to aftermath, as serious digestive troubles may arise if cattle are grazed for long periods on luxuriant aftermath containing much clover. The cattle should not be turned on when they are very hungry, or when the aftermath is damp or wet, and they should not be allowed to remain on for more than a few hours at a time until they have become accustomed to the change.

Young calves, after weaning from milk, should receive a daily allowance of meals to prevent them losing condition. A mixture of 2 parts crushed oats and 1 part linseed cake, fed at the rate of about 3 lb. per head daily, forms a good meal ration after weaning from milk. Maize meal may be used instead of crushed oats where the latter food is not available. The meal mixture, since it contains linseed, should be fed dry and not in a damp or wet condition (see Leaflet No. 19 on how to feed linseed). In districts where "husk" or hoose is liable to occur, young stock should be kept indoors at night from the middle of August onwards, and not allowed out in the morning until the dew is off the grass. They should, if possible, be kept off pastures on which outbreaks of this disease have occurred in previous years, and grazed on fresh, clean pasture, such as aftermath. This, combined with housing at night and maintaining the animals in a thriving condition by supplementary feeding with meals, will aid in preventing out-breaks of the disease. Full particulars regarding the control of "husk" or "hoose" are given in Leaflet No. 80.

SHEEP.—Where early lambs are desired, the breeding ewes may be mated with the ram during August. As best results are obtained when the ewes are in a forward, thriving condition at mating time, a good field of pasture, or of aftermath, should be reserved for the flock, and the animals turned on to it before mating takes place.

As the ram has a very important influence on the quality of the lambs produced, every farmer should use the best ram which he can afford to buy. A premium scheme for rams is in operation in all counties, and farmers in the vicinity of premium holders should take the opportunity of having some of their ewes served with these superior premium rams at a nominal fee. Further information relating to this scheme can be obtained from the Secretary of the Committee of Agriculture of the County. Particulars of the Shows and Sales at which premium rams will be selected are given in the list of Shows on page 199. Useful hints on the care and management of sheep are given in Leaflets Nos. 47 and 63.

PURCHASE OF FEEDING STUFFS.—As the feeding value of grass declines from this time of year onwards, the necessity of purchasing increased supplies of feeding stuffs to supplement the grass ration arises. When purchasing feeding stuffs, particularly made-up mixtures, farmers are advised to pay strict attention to the selection of suitable grades, and to the obtaining of the best value for money. It should be remembered that the cheapest grade may not necessarily offer best value for money, and that cheap grades are often dearest when the composition is considered. This is particularly important in the case of pollards, and when purchasing these careful attention should be paid to the fibre content, as the percentage of fibre in the sample is a good guide to the feeding value. The higher the percentage of fibre, other constituents being equal, the lower the feeding value. Samples of pollards containing more than 6 per cent. of fibre are in reality finely ground bran. Good samples of pollards contain less than 5 per cent. of fibre. Further information regarding the purchase of feeding stuffs is given in the section of this Report dealing with the average prices of feeding stuffs. When purchases are being made, a statement of the particulars of analysis prescribed under the Fertilisers and Feeding Stuffs Act should always be obtained, and should there be any doubt regarding the quality of the feeding stuff the Instructor in Agriculture for the district should be consulted without delay.

SEASONAL GARDEN AND ORCHARD NOTES.

STRAWBERRIES.—New plantations of strawberries should be made during the month of August, if possible. The ground should be well prepared by deep digging or ploughing. A dressing of good farmyard manure should be worked in, and from two to three cwt. of superphosphate per acre applied when the ground is being harrowed prior to planting. The runners must be made firm in the soil, and care must be taken to plant them so that their crowns are at soil level. Too shallow and too deep planting are the causes of many failures.

Established plantations should be cleaned, if this has not been done already. Care must be taken during cleaning to guard against damaging the crowns, and to see that the soil is not drawn away from them; in fact, a little soil should be drawn up around the crowns. Particulars of the cultivation of strawberries are given in Leaflet No. 68.

FRUIT BUSHES.—This year's fruiting branches of black currants should be cut away without delay so that the branches produced this year may be thoroughly ripened for fruiting next year. This year's fruiting canes of raspberries and loganberries should also be cut out.

CELERY.—Celery plants of the early varieties should be earthed up as required. Care must be taken when placing the soil against the plants that

none of it gets into the centre of the plants. Next month the main crop celery should be ready for the first earthing up.

CABBAGE.—As soon as the plants from the July sowing are fit for handling, they may be transplanted to a nursery bed, inserting them three or four inches apart each way. By this treatment, more robust plants are generally obtained for planting out next month than if they had been left in the seed bed.

ONIONS.—When the foliage of onions begins to turn yellow, the bulbs should be lifted and spread on some hard surface, or suspended in an airy shed, to ripen thoroughly. During ripening the bulbs should not be allowed to get wet.

Keep weeds down among the growing crops, and when peas, beans, etc., are finished, clear off the old plants and dig over the ground.

FLOWERS.—Make certain that all plants in the flower garden that require it are securely staked, or otherwise supported against wind. Remove old decayed flowers or developing seeds, and so help to prolong the flowering period.

SEASONAL POULTRY-KEEPING NOTES.

SELECTION OF BREEDING STOCK.—The selection of birds intended for breeding, if not already done, should be carried out as soon as possible. Unless the breeding stock are selected in good time, and suitably prepared as regards feeding and management, egg production may be disappointing later when the hatching season arrives. The importance of selecting only the best birds for breeding purposes may again be emphasised. Vigour, health and body size are the first essentials in the birds to be retained as breeders, and unless these qualities are inherent in them it is unreasonable to expect that the resulting progeny will be satisfactory in these respects. While the egg production record is a valuable means of determining laying capabilities, and of identifying the poor producers and the layers of small, badly-shaped and badly-shelled eggs, it should not come first in the list of requirements. Selection on egg-production alone has contributed largely to a high rate of mortality in poultry flocks and, consequently, no other consideration should be allowed to interfere with selection for good health, vigour and stamina.

The selection of good cockerels for breeding purposes is of as much importance, if not more, than that of the hens, since the male birds influence a far greater proportion of the progeny than do the hens. Only strong, well-developed birds, typical of their breed, from hens having good egg records should be chosen. The undersized, precocious type should be avoided. Further hints on the selection of breeding stock are given in Leaflet No. 29.

MANAGEMENT OF BREEDING STOCK.—The full benefits from the proper selection of the breeding stock will not be obtained unless the management of the birds, both prior to and during the breeding season, is satisfactory. The hens which have been selected should be put out on free range, and encouraged to take a rest from production, so that they may moult and be in a suitable condition to produce eggs early in the season. Full particulars regarding the management of the breeding stock subsequent to and after moulting are given in Leaflet No. 83.

BLOOD-TESTING OF BREEDING STOCK.—It should be a routine practice to have all the birds intended for breeding subjected to the blood test to determine if they are free from Bacillary White Diarrhoea disease. This disease is still responsible for a large number of deaths in chicken flocks each year, and the only means of eliminating it is to breed from stock which are free from the disease. Full particulars regarding the facilities which the Ministry provides for poultry-keepers to have blood-testing of their flocks carried out are given in the scheme for the blood-testing of poultry for Bacillary White Diarrhoea disease, a copy of which can be obtained free, on request.

PULLETS FOR WINTER EGG PRODUCTION.—Pullets from early hatched flocks should now be transferred to their winter laying quarters and liberally fed, but not forced to come into production unduly early. The birds should be well developed and of good size before laying begins. Birds which mature too rapidly and start laying at an early age usually produce small eggs, and rarely prove satisfactory. Forcing foods, such as fish meal, meat meal, soya bean meal and milk should, accordingly, be fed sparingly, and greater use made of body building foods such as bran and grain. Information relating to the feeding of birds for egg production is given in Leaflet No. 3.

The transfer to the laying quarters should take place before the pullets show signs of coming into production. Moving them when they have commenced laying will not only put them off production, but may also induce moulting with a consequent serious delay in starting laying again.

HOUSING ACCOMMODATION.—Ample housing accommodation for the pullets is essential if good production is to be obtained throughout the winter months. The house should be large enough to provide scratching accommodation during cold, wet days when the birds are best kept indoors. If the birds are on free range, each should be allowed about 9 inches of perching and 2 square feet of floor space in the house. Thus, a house 12 feet by 10 feet will accommodate about 60 pullets.

CLEANING AND REPAIR OF HOUSES.—Before the pullets are transferred, the houses should be thoroughly cleaned and disinfected, and all interior moveable

fittings dismantled and thoroughly scrubbed and disinfected. For disinfection a 5 per cent. solution (one part in twenty parts water) of Jeye's Fluid, or other reliable disinfectant, is suitable. Subsequently, the interior of the house should receive a coating of fresh limewash, to which paraffin oil at the rate of $\frac{1}{2}$ pint to each gallon of limewash has been added.

Necessary repairs to the exteriors of the houses should also be attended to before the pullets are transferred. The walls, if of wood, should be treated with a preservative, such as creosote, while the roof should receive a coating of tar.

TURKEYS.—Young turkeys should be allowed to range as much as possible at this season. Fields from which hay has been harvested are very suitable for this purpose, as they are fresh and clean. The birds should be allowed access to such fields if they are convenient to the homestead. It should be borne in mind that allowing the birds to range on fresh clean land, on which turkeys or other poultry have not been kept for a considerable time, is a valuable aid in preventing outbreaks of disease, such as blackhead. The food for turkeys at this time may consist largely of grain, but one feed of soft mash should be given daily. Leaflet No. 37 gives useful information regarding turkey rearing.

HATCHING.—This is a suitable time to hatch eggs of the heavy breeds with a view to having early spring chickens for sale for table purposes.

ANNOUNCEMENTS AND REMINDERS.

GENERAL.

BLOOD-TESTING OF POULTRY.—Poultry-keepers are reminded of the importance of having their stock blood-tested to detect "carriers" of Bacillary White Diarrhoea disease. If not already done, application to have blood-testing carried out should be made immediately to the Poultry Instructor for the district, or to the Secretary, Committee of Agriculture for the County. Unless applications are received in good time there may be considerable delay in having blood-testing carried out.

ACCREDITED POULTRY FARMS.—Poultry-keepers who wish to have their names added to the Ministry's register of accredited poultry farms should make application without delay. Copies of this scheme, and application forms of the scheme for the blood-testing of poultry, can be obtained free from the Ministry, on request.

STORMONT EGG-LAYING TEST.—The next egg-laying test at Stormont begins on the 1st October, 1937. The test provides a cheap and valuable means of identifying good laying strains of poultry, and is also of the utmost value as a means of detecting birds which are likely to be suitable for breeding. Birds which qualify for copper or brass rings are eligible for entry at the official Breeding Station, Hillsborough. Entries are now being received, and all those who desire to enter pens should post their entries so that they will reach the Ministry not later than the 1st September next. A summary of the arrangements for the test is given on page 202 of this Report. Copies of the rules of the test, along with entry forms, can be obtained from the Ministry free, on request.

GREENMOUNT COLLEGE.—The next session at Greenmount Agricultural and Horticultural College begins on Tuesday, 12th October. Copies of the prospectus, which contains full particulars regarding the courses of instruction provided, can be obtained from the Secretary, County Antrim Committee of Agriculture, Courthouse, Crumlin Road, Belfast, or from the Ministry.

TRAINING FOR GIRLS.—The next session at the Ulster Dairy School, Cookstown, and at the North-West School, Strabane, begins on the 12th October, 1937. Applications for scholarships to the North-West School should be made by intending pupils as soon as possible to the Secretary, County Committee of Agriculture. There is no examination for these scholarships which entitle the holders to free tuition and board at the School. Applications for admission to the Ulster Dairy School should be sent to the Ministry as soon as possible. Further particulars regarding these Schools are given below.

LICENSING OF BULLS.—The autumn inspections of bulls for licences are at present being carried out.

NOXIOUS WEEDS.—Members of the Royal Ulster Constabulary are now carrying out inspections of farms with a view to ascertaining if all noxious weeds have been destroyed. Neglect to destroy such weeds in good time is likely to lead to a prosecution.

SCHOOL NEWS

ULSTER DAIRY SCHOOL, COOKSTOWN.

For the term which commenced on the 20th July, the following new pupils were admitted to begin the course of training:—

Miss M. Black, Ardaghmore, Glenshesk, Ballycastle, County Antrim.
 Miss F. Brown, Mullygarry, Letterbreen, Enniskillen, County Fermanagh.
 Miss M. Carey, White House, Knocknacarry, County Antrim.
 Miss M. Chambers, Corravaccan, Cortubber P.O., Castleblayney, County Monaghan.
 Miss M. A. Devlin, Tullaree, Bryansford, County Down.
 Miss F. S. Fleming, Killyvalley, Garvagh, County Londonderry.
 Miss R. H. M. Fletcher, The Hill, Glascar, Banbridge, County Down.
 Miss A. E. Graham, Corvoy, Ballybay, County Monaghan.
 Miss M. Hawthorne, Brackfield, Killaloo P.O., County Londonderry.
 Miss L. G. Irvine, Ballyvally, Raloo, Larne, County Antrim.
 Miss E. Lynch, Loughlilube, Park, County Londonderry.
 Miss V. M'Alister, High Street, Ballynahinch, County Down.
 Miss I. J. M'Lean, Snaresbrook, Norwood Park, Belfast.
 Miss M. B. M'Gurk, Sluggan, Tirooney, Omagh, County Tyrone.
 Miss R. M'Namee, Deroar, Beragh, County Tyrone.
 Miss S. Thompson, 12 William Street, Lurgan, County Armagh.
 Miss S. M. Wilson, The Laurels, Maguiresbridge, Enniskillen, County Fermanagh.

Applications for admission to the term, which will begin on the 12th October next, are now being received by the Ministry, and as applications are dealt with in the order in which they are received, girls who intend to take out a course of training at this school are advised to send in their applications as soon as possible. The school prospectus contains an application form, and copies of this prospectus may be obtained free of charge from the Secretary of any County Committee of Agriculture, from the local Instructor in Poultry Keeping, from the Lady Superintendent, Ulster Dairy School, Cookstown, or from the Secretary, Ministry of Agriculture, Stormont, Belfast.

NORTH-WEST SCHOOL, STRABANE.

The second term of the year 1937 ended at this school on the 18th June last, and there were twenty-two pupils in the class, all of whom held scholarships awarded by the various County Committees of Agriculture. The number of scholarship holders from each county was as follows :—

County Antrim	...	...	...	3
„ Armagh	...	...	...	3
„ Down	...	...	...	5
„ Fermanagh	...	...	...	4
„ Londonderry	...	...	...	1
„ Tyrone	...	...	...	6

The following pupils are now in residence at the school as scholarship-holders, for the term which commenced on the 20th July :—

County Antrim :—

Miss E. B. Higgins, Lignamonagh, Martinstown.
 Miss A. J. Kennedy, Lenagh, Randalstown.
 Miss B. A. M'Curdy, Post Office, Rathlin Island.

County Down :—

- Miss A. Cantley, Aughnacloy, Corbet, Banbridge.
- Miss P. G. Corr, "Bluestones," Killyleagh.
- Miss M. Martin, Longstone House, Annalong.
- Miss R. I. Mitchell, "The Larches," Ballykeel.
- Miss W. G. Orr, "Mealough House," Purdysburn, Belfast.
- Miss J. M'C. Wood, Woodmount Poultry Farm, Herdstown, Donaghadee.

County Fermanagh :—

- Miss B. M'Caffrey, Glenwesh, Garrison P.O.
- Miss B. Magee, Knockaraven, Enniskillen.
- Miss A. J. Maguire, Largy, Lack.

County Londonderry :—

- Miss K. Gormley, Carnanreagh, Claudy.
- Miss M. B. Gormley, Sallowilly, Claudy.
- Miss R. E. Haslett, The Trench, Waterside, Londonderry.
- Miss M. I. Logan, Brae-side, Portstewart.
- Miss M. M'Eldowney, Gortinure, Maghera.

County Tyrone :—

- Miss J. A. Keenan, Grannan, Trillick.
- Miss L. M. M'Farland, Rose Cottage, Kilskeery.
- Miss J. G. O'Doherty, Dressog, Drumquin.
- Miss M. E. Patterson, Laurel Bank, Omagh.
- Miss J. Rodgers, Froughlough, Castlederg.
- Miss F. J. Wallace, Moneyveagh, New Mills, Dungannon.
- Miss C. Wilson, Girgadis, Trillick.

The County Committees of Agriculture are offering a limited number of scholarships to cover the cost of tuition, board and residence at this school for the session which will commence on the 12th October next, and girls desirous of being considered for the award of these scholarships should submit their applications as soon as possible to the Secretary (or Agricultural Organizer) of the County Committee of Agriculture for the county in which they reside.

Copies of the school prospectus may be obtained free of charge from the Secretary of the County Committee of Agriculture, the local Instructor in Poultry Keeping, the Lady Superintendent, North-West School, Strabane, or the Secretary, Ministry of Agriculture, Stormont, Belfast.

11

HORSE BREEDING IN NORTHERN IRELAND.

Those interested in horse-breeding in Northern Ireland should note that under the provisions of the new Horse-Breeding Act (Northern Ireland), 1937, which became law this year, it will be unlawful as from 1st January, 1938, to keep a stallion aged two years and upwards without a licence. Accordingly any owner of a stallion which was foaled in the year 1936, or earlier, should apply for a licence for the 1938 season *not later than 1st September, 1937*, to the Secretary, Ministry of Agriculture, Stormont, Belfast.

FLAX WATER.

It is desirable at this season of the year to impress upon flax growers the necessity for taking care in regulating the discharge of water in which flax has been retted.

The pollution of rivers, streams and watercourses by the discharge of flax water is, of course, an offence which renders the persons responsible liable to prosecution.

Flax growers are advised that, wherever practicable, flax water should be retained in catch dams and not released before the month of January, except when heavy rainfall has occurred and the flooded condition of rivers and streams would then enable the flax water to be discharged without risk of causing pollution.

In his own interest, as well as in the interests of Northern Ireland as a whole, it is the duty of every farmer to do his utmost to avoid harm to the fish life in our inland waters.

FIXTURE LIST OF FORTHCOMING SHOWS.

Title of Society or Association.	Centre.	Date.
Royal Ulster Agricultural Society (Autumn Show)	Balmoral, Belfast.	22nd & 23rd September.
Ulster Horticultural Society.	Belfast.	17th & 18th November.
County Antrim : Templepatrick Working Men's Association (Horticulture)	Templepatrick.	18th August.
North Antrim Horticultural Association.	Ballymoney.	26th & 27th August.
Ballymena Horticultural Society.	Ballymena.	1st & 2nd September.
County Down : Bangor Horticultural Society.	Bangor.	18th & 19th August.
Newtownards Horticultural Society.	Newtownards.	2nd September.
County Fermanagh : Fermanagh Farming Society.	Enniskillen.	25th August.
County Londonderry : Culmore Horticultural Society.	Culmore.	28th August.
City of Derry and District Horticultural Society.	Londonderry.	8th September.

Shows and Sales of Ulster Ram Breeders' Association at which premium rams will be selected :—

Place of Sale.	Date.	Breed of Sheep.
Messrs. Robson's Mart, Stewart St., Belfast.	1st & 2nd Sept.	Border Leicester.
do.	8th & 9th Sept.	Black-Face.
Messrs. Allam's Mart, Oxford St., Belfast.	29th & 30th Sept.	Border Leicester.

REGISTRATION OF ACCREDITED POULTRY FARMS SCHEME.

Applications are now being received for the registration of poultry farms under the terms of the above-mentioned Scheme. Copies of the conditions to be complied with by applicants for registration and forms of application may be obtained from the Secretary, Ministry of Agriculture, Stormont, Belfast. The last date for the receipt of applications will be the 30th September, 1937.

FIFTEENTH EGG-LAYING TEST AT STORMONT.

RESULTS TO THE END OF THE ELEVENTH PERIOD.

The eleventh four-weekly period ended on 5th August, 1937. There was a further decrease in egg production, which was due to broodiness and to moulting. The average production for the period, based on the 864 birds originally penned, was 13.3 eggs per bird, as compared with 14.9 for the previous period. The total number of eggs laid during the period was 11,540, and of this number 10,554 or 87.1 per cent. were scoring eggs, that is, eggs of 2 oz. or over in weight.

The highest sectional average egg production for the period is to the credit of the Rhode Island Reds in Section 3, namely, 14.7 eggs per bird, the White Leghorns in the Stationholders' Section 5(b) being next with an average of 14.4 eggs per bird.

For the whole period of 44 weeks during which the test has been in progress, the average production of the 864 birds is 172.3 eggs per bird.

Thirteen birds died during the period, bringing the total number of deaths to 75 for the 44 weeks of the test. This represents a mortality rate of 8.6 per

cent., which compares with a rate of 10 per cent. during the corresponding 44 weeks of the previous test.

The following are particulars of the leading pens in the different sections as at the end of the eleventh period :—

SECTION 1. WHITE WYANDOTTES (OPEN). 28 pens.

Position.	No. of pen.	Name and Address of Owner.	No. of eggs laid during 44 weeks.				Score Value
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	22	Mr. J. C. Stewart, Balloo, Killinchy, Co. Down.	947	320	40	4	1,267
2	10	Mrs. D. C. Gamble, Roan Lodge, Coalisland, Co. Tyrone.	778	431	24	1	1,209
3	3	Mrs. J. M. Brogden, Fernshaw, Dungannon, Co. Tyrone.	767	433	132	4	1,200
4	4	Mr. R. A. Copeland, Blackscull, Dromore, Co. Down.	713	456	83	3	1,169
5	5	Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh.	618	514	67	3	1,132

SECTION 2. WHITE LEGHORNS (OPEN). 13 pens.

1	33	Mrs. E. Johnston, Craigboy, Donaghadee, Co. Down.	944	193	19	—	1,137
2	35	Mr. W. D. Anderson, Ballyaugherty, Saintfield, Co. Down.	609	459	17	—	1,068
3	41	Mr. H. L. Brown, 57 Millisle Road, Donaghadee, Co. Down.	546	489	43	—	1,065

SECTION 3. RHODE ISLAND REDS (OPEN). 31 pens.

1	53	Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh.	716	586	54	—	1,302
2	64	Mr. H. Ramsey, Sylvan Cottage, Gilnahirk, Belfast.	337	838	132	—	1,175
3	63	Mr. W. Patton, The Hill, Loughries, Newtownards, Co. Down.	782	338	34	—	1,120
4	52	Mrs. H. Getty, Hillcrest, Newtownards, Co. Down.	627	482	46	1	1,109
5	62	Mrs. D. Patterson, Ballycastle Road, Coleraine, Co. Londonderry.	542	554	171	6	1,096

SECTION 4. ANY OTHER PURE BREED (OPEN). 16 pens.

Position.	No. of pen.	Name and Address of Owner.	No. of eggs laid during 44 weeks.				Score Value
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	76	Mrs. H. Getty, Hillcrest, Newtownards, Co. Down. (Light Sussex)	436	640	112	3	1,076
2	75	Mrs. M. Finlay, Langfield, Armoy, Co. Antrim. (Light Sussex.)	655	418	217	—	1,073
3	84	Mrs. S. B. Nangle, Ballyeglish, Moneymore, Co. Londonderry. (Light Sussex)	647	308	140	5	955

SECTION 5 (a). WHITE WYANDOTTES (STATION HOLDERS). 14 pens.

1	93	Mr. C. E. Crooke, The Rocks, Blaney, Enniskillen, Co. Fermanagh.	545	733	132	4	1,278
2	91	Mr. W. A. Bell, Donaghanie, Beragh, Co. Tyrone.	569	579	138	3	1,148
3	99	Mrs. M. Rodgers, Ballyginney, Dundrum, Co. Down.	804	322	90	2	1,126
4	95	Miss M. M'Allister, Turnpike House, Backnamullagh, Dromore, Co. Down.	447	651	154	3	1,098

SECTION 5 (b). WHITE LEGHORNS (STATION HOLDERS). 10 pens.

1	105	Mrs. J. Brown, Gorsebank, Culcrum, Cloughmills, Co. Antrim.	763	286	50	3	1,049
2	112	Mrs. M. Noble, Roundpark House, Killycramph, Lisnaskea, Co. Fermanagh.	374	590	86	2	964
3	104	Miss I. Gilmer, Rashee, Ballyclare, Co. Antrim.	343	601	104	—	944

SECTION 5 (c). RHODE ISLAND REDS (STATION HOLDERS). 20 pens.

1	127	Mrs. H. McMaster, Little Ballymena, Broughshane, Co. Antrim.	913	234	21	2	1,147
2	130	Mrs. H. Rea, Lisowen, Crossgar, Co. Down.	893	245	11	—	1,138
3	117	Mrs. R. J. Dunn, Ballyskeagh, Artigarvan, Co. Tyrone.	557	541	145	6	1,098
4	124	Mrs. R. McGiffert, Rathcunningham, Toye, Co. Down.	568	504	36	2	1,072
5	116	Miss S. M. Donaghy, Hilden, Ballymoney, Co. Antrim.	563	491	21	1	1,054

SECTION 6. POULTRY CLUBS AND YOUNG FARMERS' CLUBS. 12 pens.

Position.	No. of pen.	Name and Address of Club.	No. of eggs laid during 44 weeks.				Score Value
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	135	Aghadowey Poultry Club, Co. Londonderry. (Rhode Island Reds)	518	507	118	10	1,025
2	141	Crumlin Poultry Club, Co. Antrim. (White Wyandottes)	478	461	222	16	939
3	145	Saintfield Young Farmers' Club, Co. Down. (Rhode Island Reds)	441	488	128	3	929

The term "Score Value" means the total of the super grade and first grade eggs. Miss Irwin's pen of Rhode Island Reds in Section 3 is still leading in the entire test with a score of 1,302 eggs. The pen of White Wyandottes entered by Mr. Croke, in the Stationholders' Section, is now second with a score of 1,278 eggs, while Mr. Stewart's pen of White Wyandottes, in Section 1, now holds third place with a score of 1,267 eggs.

SUMMARY OF ARRANGEMENTS FOR FORTHCOMING LAYING TEST AT STORMONT.

1. Entries to be made on forms supplied by the Ministry and posted so as to reach the Ministry not later than 1st September, 1937.
2. Envelopes containing entry forms to be addressed to The Secretary, Ministry of Agriculture, Stormont, Belfast; if addressed thus they need not be stamped.
3. Pullets of all pure breeds are eligible for the Test.
4. A breeder may make as many entries as he likes.
5. All birds must pass the test for Bacillary White Diarrhoea before despatch from the farm. Upwards of 24 birds in respect of each entry of six will be tested free of charge.
6. Pullets must be mature, healthy and typical of their breeds.
7. The entry fee of £1 10s. per pen of six pullets will be refunded if the entry is not accepted.
8. Pens of birds provisionally accepted for the Test must arrive at Belfast, on Friday, 24th September, if being sent by rail, and on either Friday, 24th September, or Saturday, 25th September, 1937, if being sent by road.
9. The Test period commences on the 1st October, 1937.

PRICES OF FEEDING STUFFS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per cwt. of Feeding Stuffs at 1st August, 1937, in ten representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Castletown	Coleraine	Dungannon	Enniskillen	Omagh	Strabane
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
PROTEIN FOODS:										
Linsed (whole)	12 0	19 0	16 0	16 0	19 6	18 6	—	16 9	—	16 6
Linsed Cake, home-made	—	12 0	—	11 6	11 3	—	11 6	10 9	11 6	—
Linsed Cake, foreign	10 0	—	—	10 0	—	11 6	10 0	10 0	10 6	10 9
Linsed Cake Meal	10 0	10 6	10 3	10 0	—	11 0	10 6	11 0	11 6	10 3
Cotton Cake, decorticated	—	—	—	11 0	11 0	9 9	10 6	—	—	10 3
Earthnut Cake, decorticated	—	—	—	9 6	—	10 0	10 0	9 6	10 0	—
Soya Bean Meal (extracted)	11 0	11 6	11 0	11 0	—	11 6	11 6	11 6	12 0	11 9
Fish Meal (60% protein)	16 0	—	16 0	16 0	16 6	16 6	16 6	16 0	16 6	16 6
Meat Meal (60% protein)	16 0	16 6	14 0	—	16 6	16 6	16 0	15 3	15 6	—
Meat and Bone Meal (40% protein)	—	—	11 6	10 0	—	11 6	13 0	—	—	11 9
MEDIUM PROTEIN FOODS:										
Palm Kernel Cake	9 3	—	9 0	—	—	9 6	—	—	10 0	—
Palm Kernel Meal	9 3	9 6	9 0	—	—	9 6	—	—	10 0	—
STARCHY FOODS:										
Maize (whole)	7 0	7 6	7 6	7 0	7 9	7 9	7 3	7 9	—	7 3
Maize Meal	7 9	7 9	7 6	7 6	8 0	7 9	7 6	7 9	7 9	8 0
Maize, Flaked	8 3	8 6	8 0	8 0	8 6	8 3	8 6	8 6	8 9	8 3
Wheat (whole)	10 6	11 6	10 0	10 0	11 6	12 0	—	—	—	—
Bran, Red	8 9	9 0	9 0	9 0	—	9 3	9 0	10 0	9 0	7 6
Bran, White	9 9	10 0	9 9	9 0	10 3	10 0	10 0	10 9	10 6	10 9
Pollard, Brown	8 6	9 6	9 0	9 0	—	9 3	9 0	9 6	9 0	7 6
Pollard, White	—	10 0	9 6	10 0	—	9 9	10 0	10 6	10 0	10 6
Barley Meal	9 9	10 0	9 9	10 6	10 3	10 6	10 6	11 0	10 9	11 0
Tapioca Root Flour	—	9 0	8 0	—	—	8 6	7 9	—	—	—
Oats (whole)	8 9	10 0	10 0	10 0	9 0	9 4	12 0	10 8	8 6	10 6
Crushed Oats	9 3	10 6	10 6	10 6	9 6	9 10	12 6	11 0	—	10 6

NON-CONCENTRATES.—The average prices at representative markets at the beginning of August were as follow:—Potatoes (New), 5/0³/₄d. per cwt.; Upland Hay, 74/4 per ton; Oat Straw, 49/1d. per ton.

AVERAGE PRICES OF FEEDING STUFFS.

The following table shows the average retail cash prices per cwt. of feeding stuffs at 1st August, 1937, with comparative prices as at the first of the previous month; the costs per unit of protein equivalent and of starch equivalent are also given in respect of each month.

	Protein equivalent	Starch equivalent	Average price per cwt. at		Cost per unit of Protein equivalent		Cost per unit of starch equivalent	
			1st Aug.	1st July	August	July	August	July
Protein Foods			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed	19.0	119.0	16 9	18 0	17 7½	18 11½	2 10	3 0
Crushed linseed	19.0	119.0	18 7	18 8	19 7	19 8	3 1½	3 1½
Linseed cake (home-made)	25.0	72.0	11 5	11 3	9 1½	9 0	3 2	3 1½
Linseed cake (foreign)	25.0	72.0	10 7	10 2	8 5½	8 1½	2 11	2 10
Linseed cake meal	25.0	72.0	10 8	10 9	8 6½	8 7	2 11½	3 0
Decorticated Cotton cake	35.0	71.0	10 5	10 1	5 11½	5 9	2 11	2 10
Decorticated Earthnut cake	41.0	73.0	9 10	9 11	4 9½	4 10	2 8	2 8½
Extracted Soya Bean meal	38.0	64.0	11 5	11 1	6 0	5 10	3 7	3 5½
Fish meal (60% protein)	53.0	59.0	16 3	16 2	6 1½	6 1	5 6	5 6
Meat meal (60% protein)	55.0	61.0	15 9	15 10	5 9	5 9	5 2	5 2
Meat & bone meal (40% protein)	36.0	44.0	11 7	11 7	6 5	6 5	5 3	5 3
Medium Protein Foods								
Palm kernel cake	17.0	75.0	9 6	9 4	11 2	11 0	2 6½	2 6
Palm kernel meal	17.0	75.0	9 6	9 4	11 2	11 0	2 6½	2 6
Starchy Foods								
Maize	6.8	81.0	7 5	7 2	21 10	21 1	1 10	1 9
Maize meal	6.8	81.0	7 9	7 7	22 9½	22 4	1 11	1 10½
Flaked maize	8.6	83.0	8 4	8 3	19 4½	19 2	2 0	2 0
Wheat	9.6	72.0	10 11	11 1	22 9	23 1	3 0½	3 1
Red bran	10.0	43.0	9 0	8 11	18 0	17 10	4 2½	4 2
White bran	10.0	43.0	10 2	10 0	20 4	20 0	4 9	4 8
Brown pollard	11.0	60.0	8 11	9 0	16 2½	16 4½	3 0	3 0
White pollard	11.0	60.0	10 0	10 0	18 2	18 2	3 4	3 4
Barley meal	7.0	70.0	10 5	10 3	29 9	29 3	3 0	2 11
Oats	7.6	60.0	9 10½	9 9	26 0	25 8	3 3½	3 3
Crushed oats	7.6	60.0	10 5½	10 2	27 6	26 9	3 6	3 5
Tapioca root flour	1.0	83.5	8 4	8 4	166 8	166 8	2 0	2 0
Non-Concentrates								
Potatoes	0.6	18.0	5 0½	4 10	168 9	161 1	5 7½	5 4½
Upland hay	4.9	24.0	3 8½	4 0	15 1½	16 4	3 1	3 4
Oat Straw	0.9	20.0	2 5½	2 4½	54 8	52 9	2 5½	2 4½

The object of the foregoing tables, besides providing information regarding the prices of feeding stuffs and the trend of prices, is to give purchasers a

guide as to the economic purchase of supplies. It should be understood that the price per ton is not a sound basis on which to judge whether or not a particular food or grade of a particular food is good value for money. The composition of the foods is the only basis on which different grades can be compared. The value of foods of different kinds, but of the same nature in reference to market prices, can also be compared on this basis.

In the case of an artificial manure which supplies only one fertilising ingredient as, for example, sulphate of ammonia, which supplies nitrogen, the cost of the unit of nitrogen at the price charged can be determined quite readily by dividing the price per ton by the percentage of nitrogen in the sample, and the figure thus obtained is the cost of a unit of nitrogen. By this method the most economical source of nitrogen can be ascertained. Similarly, in the cases of phosphatic and potassic manures.

With feeding stuffs, however, the same method cannot be applied to determine comparative values. This is because every feeding stuff contains three important food constituents in varying proportions. These are (1) carbohydrates, (2) oils or fats, and (3) proteins or albuminoids. The carbohydrates comprise a group of substances such as starch, sugar and cellulose. These substances supply heat or energy to the animal, and the surplus goes to form fat. They are the fuel which the animal requires to keep the body "fires" burning. The oils of a feeding stuff are also heat and energy suppliers, and the surplus is stored as fat. The oils are approximately $2\frac{1}{2}$ times more valuable than the carbohydrates as heat and energy producers, but excess in a ration may lower its digestibility and cause digestive troubles. The proteins are the most valuable and most expensive food constituent. They contain nitrogen and are the part of the food from which products which contain protein are chiefly made. Thus the protein products, such as lean meat, milk and eggs, are formed principally from protein, and young, growing animals, dairy cows and laying hens must have an adequate quantity of protein for full growth, development and production.

While all animals require a certain amount of carbohydrates, oils and proteins, the relative amounts depend on the class of stock. For example, a two-year-old fattening bullock requires much less protein than a dairy cow in milk, and a fattening chicken less than a laying pullet.

There are wide differences in the composition of the different kinds of feeding stuffs. Some are rich in carbohydrates and, therefore, particularly valuable for fattening purposes. These include oats, maize, barley and wheat, and their products. Others are rich in protein and are valuable for producing flesh, milk and eggs. These include decorticated cotton cake, decorticated earlthnut cake, meat meal and soya bean meal.

In the following table the composition of some of the commonly used feeding stuffs is shown—

	Water.	Protein.	Oil.	Carbohydrates.
Non concentrates				
Swede turnips ..	88	1	0.2	9
Potatoes ..	75	2	0.1	21
Cabbage ..	89	1.5	0.5	8
Oat Straw ..	14	4	2	37
Meadow hay ..	10	10	3	45
Pasture grass ..	80	3.5	0.8	10
Fattening Foods				
Crushed oats ..	13	9	6	60
Maize meal ..	12	10	4	70
Barley meal ..	13	12	2	66
Pollard ..	13	15	5	57
Flesh forming foods				
Decorticated Cotton cake ..	9	40	9	26
Decorticated Earthnut cake ..	10	46	7	23
Meat meal ..	11	60	6	—
Soya bean meal ..	11	44	1.5	32

The problem confronting the purchaser of feeding stuffs, who is concerned with the business of getting best value for money, is one which is much more difficult to solve than is the case with artificial fertilisers. There are at least four aspects of the problem to be considered :

- (1) the quality of the different foods offered for sale. This can be determined by reference to the particulars of composition which a seller must give a purchaser in accordance with the Fertilisers and Feeding Stuffs Act.
- (2) The physical condition of the foods, and if fresh or stale.
- (3) The suitability of the foods for the purpose in view.
- (4) The comparative values of the foods at the prices quoted.

The chief concern of this section of the Report is comparative values and, therefore, that aspect of the problem will be considered specifically.

The proteins play a part in the nutrition of the animal which cannot be taken by either carbohydrates or oils. In addition to this, the proteins, carbohydrates and oils have very different values for the production of energy or fat. It therefore follows that the simple procedure of totalling the percentages of these three ingredients and dividing this total into the price per ton in order to obtain a value for a unit of the food-stuff is quite unsound. Various methods have been used to compare the values of different feeding stuffs, but none is completely satisfactory. For practical purposes the least cumbersome is the

method whereby the food-stuffs are placed in groups of similar composition, and the values of the members of each group are then compared by consideration of (a) their protein equivalents, and (b) their starch equivalents. The starch equivalent is the number of pounds of starch which would be required to produce the same amount of "fat" in an animal as 100 pounds of the food-stuff in question. It is essentially a measure of the fat-producing value of the food-stuff. The protein equivalent is the number of pounds of digestible true protein, plus half the number of pounds of non-protein nitrogenous substances such as amides, present in 100 pounds of non-protein nitrogenous substances the value of the food-stuff to the animal as a source of protein.

By this method all foods can be reduced to comparable standards based on (1) the protein equivalent, and (2) the starch equivalent.

The next stage in comparing values is to determine the cost of a unit of protein equivalent and of starch equivalent in the different foods which are being compared, and to enable the reader to do this the protein and starch equivalent figures for the different foods are given on the table on page 204, and also the cost per unit of protein equivalent and of starch equivalent in each case. These costs have been determined by dividing the protein equivalent figure and the starch equivalent figure, respectively, into the current price per ton, and the lower the quotient figures thus obtained the cheaper is the particular food as a source of protein or of starch equivalent as the case may be.

However, it would be quite misleading to compare the cost of a unit of protein equivalent in a protein food (which is purchased principally for its protein) with the cost of a similar unit in a starchy food. In other words, foods such as maize meal and pollard cannot be compared on the basis of cost of protein equivalent with foods such as decorticated cotton cake and meat meal.

The best course to adopt is to consider for what purpose the particular food is required, decide what foods are suitable for that purpose, examine the samples of these different foods which are offered and, if all appear to be satisfactory, apply the unit value system of determining which one provides protein equivalent or starch equivalent at the cheapest rate. A few examples may be helpful in explaining the procedure.

- (1) Suppose it is intended to purchase a protein food for the purpose of balancing a ration for dairy cows. The protein foods suitable for dairy cows are decorticated cotton cake, decorticated earthnut cake and soya bean meal. From the table on page 204 it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Decorticated cotton cake	...	...	5/11½d.
Decorticated earthnut cake	...	...	4/9½d.
Soya bean meal	...	...	6/0d.

Accordingly decorticated earthnut cake is the cheapest source of protein.

- (2) A protein food is required as a milk substitute to balance the ration for fattening pigs. The foods suitable for this purpose are soya bean meal, meat meal and meat and bone meal. Referring again to the table, it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Soya bean meal	...	...	6/0d.
Meat meal (60% protein)	...	...	5/9d.
Meat and bone meal (40% protein)	...	...	6/5d.

Therefore meat meal (60% protein) is the cheapest source of protein amongst the purchased foods suitable for pigs. This example shows also how the price per ton may mislead a purchaser into thinking he is being economical when he buys at the cheapest price. The 60% meat meal costs 4/2d. per cwt. more than the 40% meat and bone meal, and yet it is a cheaper source of protein than the latter. Besides, a lesser proportion in the meal mixture will suffice, and having usually a lower content of oil than the 40% grade, it is likely to prove more satisfactory than that grade, both from the thriving point of view and its effect on the quality of the bacon.

- (3) Whether is it more economical to feed white pollard than brown pollard or white bran than red bran, even though the prices per ton of the white grades are higher than those of the brown or red grades? The figures in the table show that the cost of both the unit of protein equivalent and of starch equivalent is less for the brown pollard than the white, and less for the red than the white bran. It follows, therefore, that at current prices the coloured grades of pollard and bran are cheaper than the white grades. It should be remembered in this connection, however, that the comparison of costs in these cases have been made on the assumption that the composition of the coloured grades is the same as that of the white grades. A pollard containing say, 8 per cent. fibre, even if of a white colour, would have a far lower feeding value than one containing only 4 per cent. of fibre. Colour is not a guide as to the feeding value of pollard or bran.

PRICES OF FAT STOCK.

The following were the average prices per live cwt. of bullocks and heifers, sold at Belfast Auction Marts during each of the four weeks ended 27th July, 1937 :—

Week ended.	Bullocks.		Heifers.	
	s.	d.	s.	d.
6th July ...	42	9	...	42 3
13th July ...	42	6	...	41 6
20th July ...	41	6	...	41 3
27th July ...	40	3	...	40 3

If the information you require is not obtainable in these pages, write to the Secretary, Ministry of Agriculture, Stormont, (Room 401), Belfast.

SHIPMENTS OF LIVE STOCK.

Statement showing the Shipments of Live Stock from Northern Ireland ports during the following periods :—Months of July, 1937, June, 1937, July, 1936 ; Seven months ended 31st July, 1937, and 31st July, 1936.

PORTS OF :—	CATTLE.				SHEEP.			PIGS.						
	Fat	Stores	Milch Cows	Springers.	Calves	Total	Fat	Stores	Lambs	Total	Fat	Stores	Total	Horses
Belfast ...	2,793	3,301	1,665	236	—	7,995	—	—	10,981	10,981	7,968	—	7,968	289
Larne ...	54	2,042	—	5	—	2,101	—	—	48	6,997	2,771	312	3,083	45
Londonderry ...	47	4,643	61	84	91	4,926	169	51	9,733	9,953	303	—	303	5
Newry ...	2	184	—	12	—	198	—	—	95	95	—	—	—	—
Total, July, 1937 ...	2,896	10,170	1,726	337	91	15,220	169	99	27,806	28,074	11,042	312	11,354	339
Total, June, 1937 ...	2,845	20,675	1,596	488	653	26,257	283	—	16,893	17,176	15,291	240	15,531	572
Total, July, 1936 ...	4,797	13,059	1,584	457	144	20,041	125	5	36,269	36,399	4,185	59	4,244	441
Total, Seven months ended 31st July, 1937 ...	37,853	122,485	8,741	1,408	3,473	173,960	17,967	99	52,591	70,657	86,458	1,958	88,416	2,295
Total, Seven months ended 31st July, 1936 ...	48,086	104,278	8,369	1,310	12,113	174,156	6,409	5	72,341	78,755	28,030	404	28,434	3,647

IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 30th June, 1937, and the six months ended 30th June, 1937, with comparative figures for the corresponding periods in 1936. This information also includes trade with the Irish Free State across the land boundary.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

COMMODITY.	IMPORTS.				EXPORTS.			
	Month ended 30th June	Month ended 30th June	6 months ended 30th June	6 months ended 30th June	Month ended 30th June	Month ended 30th June	6 months ended 30th June	6 months ended 30th June
	†1937	1936	†1937	1936	†1937	1936	†1937	1936
Bacon cwt.	1,869	2,378	14,835	17,495	20,003	22,933	179,614	186,677
Hams cwt.	948	1,934	7,863	10,577	9,756	6,235	60,559	67,782
Pork cwt.	—	521	3,287	7,350	2,517	3,466	17,893	21,069
Butter cwt.	10,590	18,903	101,394	107,400	365	704	1,229	1,781
Eggs gt. hds.	5,452	134,748	487,143	816,919	509,336	340,006	1,889,715	1,946,413
Oat Products (inc. Oatmeal)cwt.	1,252	1,994	11,194	13,452	5,097	4,467	48,676	44,745
Potatoes tons	61	668	5,280	10,717	*6,118	*21,621	*133,256	*163,016
Poultry cwt.	—	223	1,771	2,716	10,370	6,011	104,941	98,082
Grass Seeds cwt.	202	604	6,476	7,030	10,377	9,724	227,758	273,929

* These figures represent the quantities of potatoes inspected for shipment by the Ministry of Agriculture.

† These figures do not include direct trade with places abroad.

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 21 fairs in Northern Ireland during the months of July, 1936, and June and July, 1937.

Description of Live Stock.	July, 1936.		June, 1937.		July, 1937.	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ...	6,418	4,990	7,862	6,612	6,208	4,671
Fat Cattle ...	1,400	1,288	1,076	876	1,240	1,074
Dairy Cattle ...	1,371	1,140	1,342	1,132	1,180	946
Sheep ...	284	159	520	407	475	351
Lambs ...	2,136	1,809	1,657	1,533	2,020	1,644
Young Pigs ...	3,744	2,894	3,590	2,790	3,254	2,628

Trade in live stock at fairs last month continued on satisfactory lines, although business at the close was inclined to be limited by the decrease in the offerings of cattle, and the falling off in the attendance of farmers who were taking full advantage of the better weather for getting in their hay crop. Store cattle offerings especially reflected this, and numbers were down on the month, although perhaps not markedly smaller than for July, 1936. With shippers and graziers operating freely at all centres during the greater part of July trade was steady at almost late rates for the many animals showing quality and condition, especially strong polly bullocks for fattening and nice young heifers suitable for breeding. The easier tendency for prices noticeable in the cattle end was, however, more marked in the case of beef, but here again supplies, which increased slightly on the month, were selling well. Prime quality stock were less affected by the downward trend of values, but many of the grass-fed animals were lacking in finish, and for these price reductions were appreciable. Dairy cattle were shown in smaller numbers, and on the whole price fluctuations were in seller's favour. Anything young showing quality was bought up quickly, and many promising young springers changed hands at satisfactory rates. As usual the fair proportion of inferior sorts in the offerings were slow to sell. Sheep and lambs were about normal-sized offerings, and the demand for fat lambs, of the downs and cross-bred types especially, was keen at firm rates, but at most fairs anything fit for butchering sold readily at recent prices. Store lambs for feeding were also a fairly large trade, downs and cross-breds being in the majority, and selling

well at from 25/- to 37/6 each. A few ewe lambs for breeding, and a fair number of breeding ewes also were cashed at good prices.

Supplies of young pigs showed a slight decline on the month, and trade for these was steady at firm prices, averaging about 30/- each. Store pigs were in good numbers at a few centres, and most of them were sold at recent prices. Trade for breeding sows continued on similar lines to last month, and prices for the best types were generally little altered.

10th August, 1937.

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MINISTRY OF AGRICULTURE. List of Leaflets and other Publications.

LEAFLETS.

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| <p>No 1. Flax Seed, 1937.
 " 2. Improvement of Farm Poultry.
 " 3. Feeding for Egg Production.
 " 4. Marketing of Eggs.
 " 5. The Dishorning of Calves.
 " 6. The Packing of Apples in Standard Boxes.
 " 7. Potato Trials.
 " 8. Seed Testing for Farmers.
 " 9. The Renovation of Orchards.
 " 10. Fruit Tree Pests—Capsid Bugs.
 " 11. Fruit Tree Pests—Aphides and Apple Sucker.
 " 12. Fruit Tree Pests—Caterpillars.
 " 13. Contagious Abortion in Cattle.
 " 14. Cheese-making on the Farm.
 " 15. Suitable Varieties of Fruit.
 " 16. The Feeding of Dairy Cows.
 " 17. Home Bottling of Fruits and Vegetables.
 " 18. Marketing of Dead Poultry.
 " 19. How to Feed Lined.
 " 20. The Hatching and Rearing of Chickens.
 " 21. The Uses and Advantages of Portable Poultry Houses.
 " 22. Leather-Jacket Grubs.
 " 23. The Handling and Care of Wool.
 " 24. Fluke in Sheep.
 " 25. The Rearing and Management of Young Horses.
 " 26. Ordnance Survey Maps for Farmers.
 " 27. How to Keep Eggs Clean.
 " 28. The Construction of a Laying House for Poultry.
 " 29. The Selection and Breeding of Laying Hens.
 " 30. Coccidiosis in Poultry.
 " 31. Roup of Poultry (Cowl Fox).
 " 32. Spraying Calendar for Apple Orchards.
 " 33. The Pruning of Apple Trees.
 " 34. The Fattening of Pigs.
 " 35. Advantages of Milk Recording.
 " 36. The Raising and Fattening of Turkeys.
 " 37. The Destruction of Charlock.
 " 38. The Production of Clean Milk.
 " 39. The Laying Down and Management of Temporary Pastures.
 " 40. Blackleg, Blackquarter or Quarterill.
 " 41. The Purchase of Balanced Rations for Dairy Cows.
 " 42. Tuberculosis in Poultry.</p> | <p>No. 44. Results of Crop Experiments, 1936.
 " 45. The Breeding and Rearing of Pigs.
 " 46. Hints for Winter Egg Production.
 " 47. The Care and Management of Sheep.
 " 48. American Gooseberry Mildew.
 " 49. Potato Blight.
 " 50. Butter-making on the Farm.
 " 51. Gapes in Chickens.
 " 52. The Breeding and Rearing of Calves.
 " 53. Destruction of Ragwort or Benweed.
 " 54. Identification of Egg Supplies.
 " 55. How to have Eggs of First Quality.
 " 56. How the Fertilisers and Feeding Stuffs Act benefits the Farmer.
 " 57. Bacillary White Diarrhoea (Pullorum Disease).
 " 58. Advantages of Winter Agricultural Classes.
 " 59. The Care and Management of Breeding Bulls.
 " 60. The Production of Timber on the Farm.
 " 61. Sheep—Castration, Docking, Foot-Rot and Care of Feet.
 " 62. The Destruction of Warble Fly Maggots in Cattle.
 " 63. The Packing of Apples in Barrels.
 " 64. Seed Testing Facilities for Traders.
 " 65. The Cultivation of Vegetables.
 " 66. The Cultivation of Strawberries.
 " 67. The Construction of Piggeries.
 " 68. Ringworm.
 " 69. The Cultivation of Raspberries.
 " 70. Tree Planting for Shelter and Ornament.
 " 71. The Propagation and Maintenance of Healthy Stocks of Potatoes.
 " 72. New Pure Strains of Flax.
 " 73. Pig Production and the Pigs Marketing Scheme.
 " 74. Acarine (Isle of Wight) Disease of Bees.
 " 75. Licensing of Milk Producers and Distributors.
 " 76. Graded Milk.
 " 77. The Picking and Storing of Apples.
 " 78. Hoose or Husk in Farm Stock.
 " 79. The Construction of Cow Houses.
 " 80. White Scour in Calves.
 " 81. The Care, Management and Feeding of the Poultry Breeding Stock.</p> |
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Any of the above leaflets may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

CIRCULARS.

- No. 1. Phosphatic Fertilisers.
 " 5. Why Pay a Tax on the Horns of Cattle?
 " 8. Basic Slag.
 " 9. Smut in Oats.
 " 10. Purchase of Fertilisers and Feeding Stuffs.
 " 11. Fertilisers and Feeding Stuffs Act—General Summary.
 " 12. The Treatment of Liver Fluke.
 " 13. The Ox-Warble Fly.
 306. Fertilisers and Feeding Stuffs Act, 1925—Revision of Regulations.

MISCELLANEOUS PUBLICATIONS.

- Store Cattle.
 Reports on Egg-Laying Tests.
 Crop Insurance.
 List of Growers of Certified Crops of Immune Varieties of Potatoes.
 List of Growers of Certified Crops of Non-immune Varieties of Potatoes.
 The Ministry's Monthly Report.
 Register of Premium Stallions.
 Guide to the Live Stock Breeding Act (Northern Ireland), 1922.
 Guide to the Marketing of Fruit Act (Northern Ireland), 1932.

Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated:—

- (1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
- (2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price 2/- net.
- (3) The Journal of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
- (4) The Agricultural Output of Northern Ireland, 1925. Price 2/6 net.